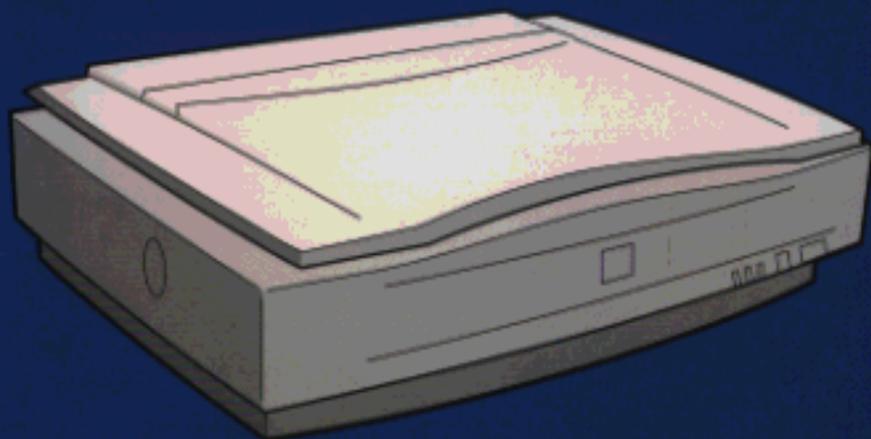


EPSON

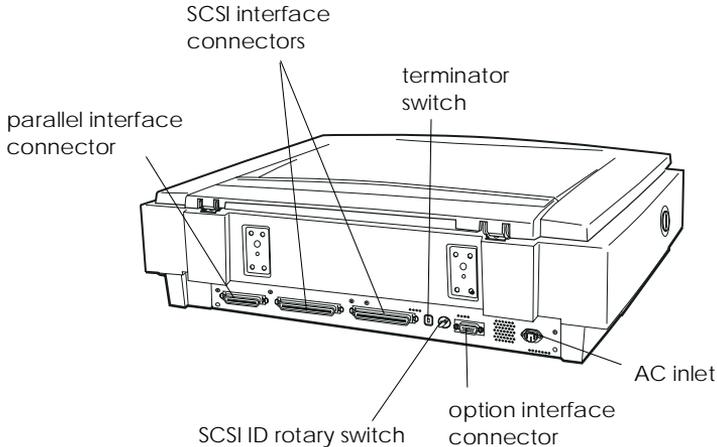
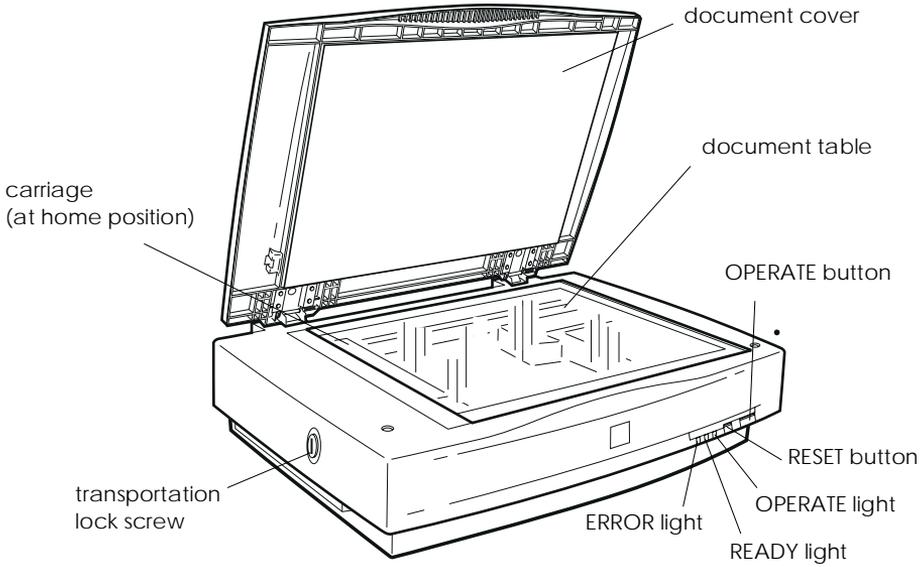


COLOR IMAGE SCANNER

GT-12000

User's Guide

Scanner Parts



EPSON® GT-12000

COLOR IMAGE SCANNER

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User's Guide

Declaration of Conformity

Manufacturer: SEIKO EPSON CORPORATION
Address: 3-5, Owa 3-chome, Suwa-shi,
Nagano-ken 392 Japan

Representative: EPSON EUROPE B.V.
Address: Prof. J. H. Bavincklaan 5 1183
AT Amstelveen
The Netherlands

Declares that the Product:

Product Name: Image Scanner
Type Name: GT-12000
Model: G650A

Conforms to the following Directive(s) and Norm(s):

Directive 89/336/EEC:

EN 55022 Class B
EN 61000-3-2
EN 61000-3-3
EN 50082-1
IEC 801-2
IEC 801-3
IEC 801-4

Directive 73/23/EEC:

EN 60950

August, 1997

Y. Ishii
President of EPSON EUROPE B.V.

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Introduction

The EPSON® GT-12000 is a true 800-dpi full-color flatbed image scanner with an A3 or US B size scanning area. It has the ability to scan in color or grayscale, making it ideal for virtually all uses, from simple drawings to complex full-color illustrations. It achieves extremely high quality in color by reading and saving 36 bits per pixel.

Features

The GT-12000 offers the following features:

- ❑ Full color or grayscale scanning. For color scanning, you can select up to 16 million colors. For grayscale, you can select up to 256 grays.
- ❑ Scanning resolution of 800 dpi. You can adjust the output resolution to match the resolution of your output device.
- ❑ Automatic Area Segmentation (AAS) provides you with the capability to separate text from photographs on a page so that grayscale images will be clearer and text recognition is more accurate.
- ❑ Text Enhancement Technology. This feature enhances text recognition accuracy when using your scanner for optical character recognition (OCR) scanning.
- ❑ Two resident interfaces, bidirectional parallel and SCSI. Using these interfaces, you can connect two computers to the scanner at the same time.
- ❑ Higher quality output with EPSON TWAIN Pro's "Best & de-screening" option, which automatically removes unwanted moiré patterns from scanned images.

- ❑ The EPSON TWAIN Pro software helps let you take full advantage of your scanner's advanced features.
- ❑ Software control of all scanner functions. Software commands are backward compatible with the EPSON GT-12000 color image scanner.

Options

The following optional items are available to expand the versatility of your scanner. For detailed information on the use of these options, see the guides that come with the options.

Bidirectional Parallel Interface Board (B80818*)

This board provides parallel connection between the scanner and IBM® PC/AT or IBM-compatible computers. Setup and installation of this board are fully described in the manual that comes with the board. An interface cable must be purchased separately.

Auto Document Feeder (B81311*)

This option is designed primarily for optical character recognition (OCR) scanning. The automatic document feeder allows you to scan up to 30 pages automatically. You can then use them in a word processing program just as if you had typed them yourself.

Transparency Unit (B81310*)

This option allows you to scan transparent materials, primarily 35mm slides and black-and-white negatives. It has a maximum reading area of 290 × 420 mm, which allows you to scan transparent materials up to A3 or US B size.

SCSI System Cable (25-pin to 50-pin) (B860081)

This cable provides connection between a SCSI device and an Apple® Macintosh® computer.

SCSI Peripheral Cable (50-pin to 50-pin) (B860091)

This cable provides connection between two SCSI devices in a daisy chain.

Interface Cables

For the parallel interface, you need to have a suitable interface cable to connect the scanner to your computer. Make sure you choose a shielded cable.

How to Use This Guide

- ❑ See Chapter 1, “Setting Up the Scanner,” for information about setting up your scanner and connecting it to your computer. Be sure to read this first.
- ❑ See Chapter 2, “Scanning Basics,” for information on the operation of your scanner.
- ❑ See Chapter 3, “Options,” for information about installing and using options.
- ❑ See Chapter 4, “Troubleshooting and Maintenance,” for information on solving scanner problems, maintaining your scanner, and transporting your scanner. There is also a section on how to improve your scanned output by upgrading your equipment in this chapter.
- ❑ See Appendix A for various specification information.
- ❑ See Appendix B for customer support information.

For information on scanning, see the software manual that came with the scanner. Additionally, see your application documentation if necessary.

Warnings, Cautions, and Notes



Warnings must be followed carefully to avoid bodily injury.



Cautions must be observed to avoid damage to your equipment.

Notes contain important information and useful tips on the operation of your scanner.

For United Kingdom Users

Safety information



Warning: This appliance must be earthed. Refer to rating plate for voltage and check that the appliance voltage corresponds to the supply voltage.

Important: The wires in the mains lead fitted to this appliance are coloured in accordance with the following code:

Green and yellow — Earth

Blue — Neutral

Brown — Live

As the colours of the wires in the mains lead of this appliance may not correspond with the coloured markings identifying the terminals in your plug, proceed as follows:

The green and yellow wire must be connected to the terminal in the plug which is marked with the letter E or with the earth symbol (\perp).

The blue wire must be connected to the terminal in the plug marked with the letter N.

The brown wire must be connected to the terminal in the plug marked with the letter L.

If damage occurs to the plug, replace the cord set or consult a qualified electrician.

Replace fuses only with a fuse of the correct size and rating.

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 of all devices plugged into the wall outlet does not exceed 15 amperes.
- ❑ Except as specifically explained in this user's guide, 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. Adjust only those controls that are covered by the operating instructions.

- ❑ Place your scanner close enough to the computer or workstation for the scanner cable to reach both ends.
- ❑ Place the scanner where you can easily unplug the power cord.
- ❑ If you plan to use the scanner in Germany, observe the following:

To provide adequate short-circuit protection and over-current protection for this scanner, the building installation must be protected by a 16 Amp circuit breaker.

Bei Anschluß des Scanners an die Stromversorgung muß sichergestellt werden, daß die Gebäudeinstallation mit einem 16 A-Überstromschalter abgesichert ist.

Chapter 1

Setting Up the Scanner

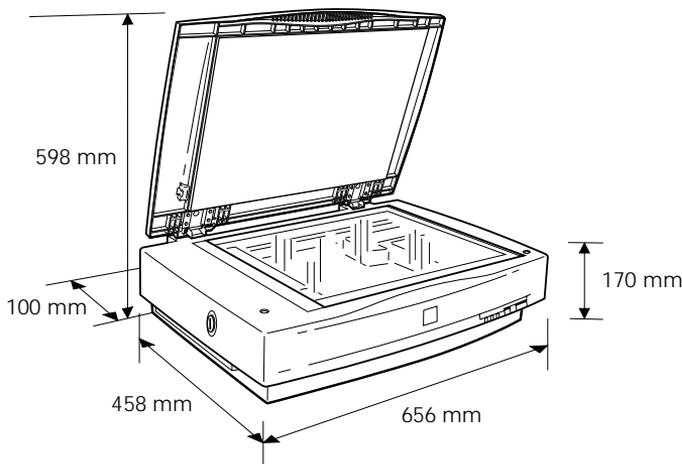
1

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Choosing a Place for the Scanner

Follow the guidelines listed below when selecting a location for your scanner:

- Place the scanner on a flat, stable surface. The scanner will not operate properly if it is tilted or at an angle.
- Place the scanner close enough to the computer for the interface cable to reach it easily.
- Allow some space behind the scanner for the cables, and be sure to place the scanner where you can easily unplug the power cord. Also allow sufficient space above the scanner so that you can fully raise the document cover.

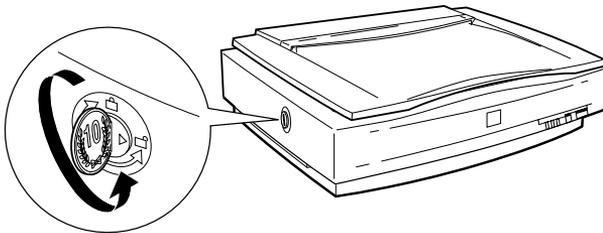


- Keep the scanner away from high temperatures and humidity. Also avoid using or storing the scanner in places subject to rapid changes of temperature and humidity.
- Keep the scanner away from direct sunlight and strong light sources.
- Avoid places subject to shocks and vibrations.

Releasing the Transportation Lock Screw

Before connecting the scanner to a power source, you must release the transportation lock screw.

1. Place the scanner on a flat, stable surface with the left side facing you.
2. Turn the transportation lock screw to the unlocked position using a coin or similar object, as shown below.

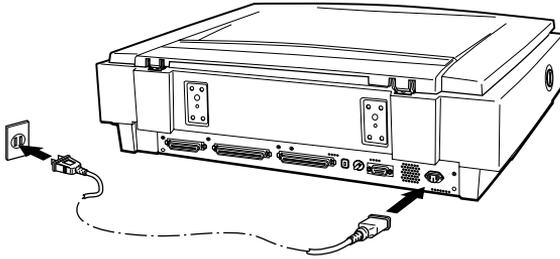


Note:

You will need to return the transportation lock screw to the locked position if you store or transport the scanner.

Plugging in the Scanner

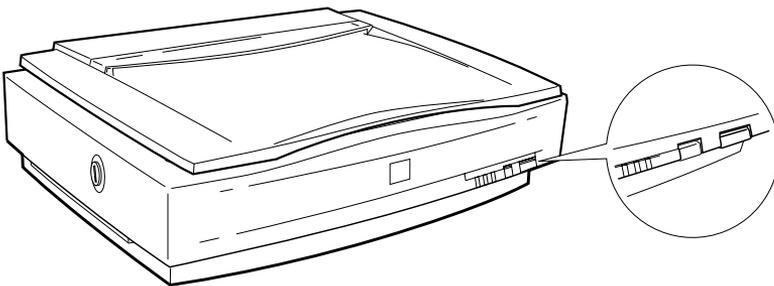
1. Connect the power cable to the power inlet on the rear of the scanner and plug the other end into a properly grounded outlet as shown below.



Caution:

There are several versions of this scanner designed for different voltages, and it is not possible to change the voltage. If the label on the back of the scanner does not show the correct voltage for your country, contact your dealer.

2. If any of the scanner's lights come on, press the OPERATE button to turn the scanner off.



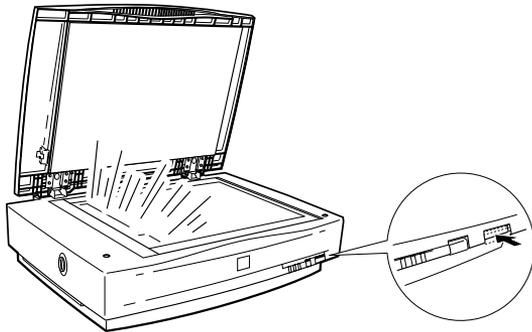
Caution:

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

Initialization

By observing the scanner's initialization, you can make sure that the scanner is operating properly before you connect it to your computer.

1. Open the document cover so you can see the operation of the scanner during initialization.
2. Turn on the scanner by pressing the OPERATE button.



While the scanner initializes, the fluorescent lamps on the carriage flash. If the carriage is not at the home position (the left of the scanner), it moves to the home position.

When the scanner has completed its initialization, the READY light comes on. If the scanner does not work as described, turn it off. Make sure that the power cord is firmly plugged in and that you have released the transportation lock screw, then turn it on again.

Connecting the Scanner to Your Computer

Your scanner has both a bidirectional parallel interface and a SCSI interface. You can connect both kinds of interface cables to the scanner at the same time. The scanner switches automatically to the appropriate interface.

- ❑ For a PC, do one of the following:

Connect the computer to the scanner's bidirectional interface using a shielded, twisted-pair parallel interface cable. Install a bidirectional parallel interface board in your computer, if necessary.

Note:

IBM PS/2® computers and many other PCs have built-in bidirectional parallel interfaces. You do not need to install an additional one in these computers unless you need the built-in parallel interface for your printer.

Connect the computer to the scanner's SCSI interface. Install a SCSI interface board in your computer, if necessary.

- ❑ For a Macintosh computer, connect the scanner to your Macintosh's built-in SCSI port.

To use an interface correctly, you may need to change settings on the scanner, computer, or both. The following sections explain how to set up and connect each type of interface.

Connecting the scanner to a parallel interface

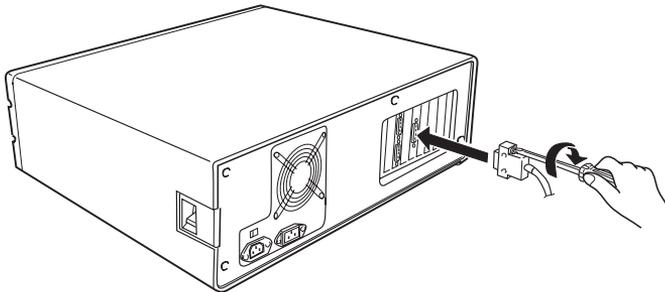


Caution:

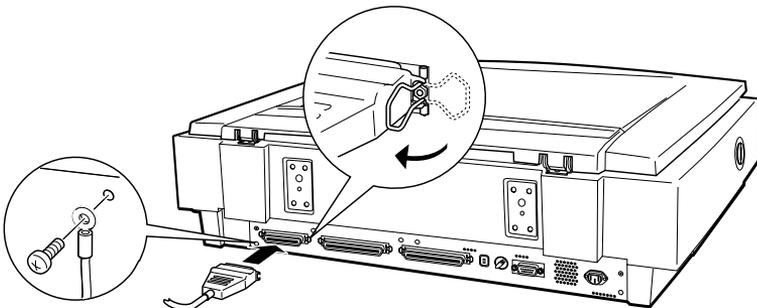
The scanner's bidirectional parallel interface requires a bidirectional interface on your computer. Check your computer's specifications to see if its built-in parallel interface is bidirectional.

Use a standard shielded parallel interface cable.

1. Make sure that both the scanner and computer are turned off.
2. Connect the 25-pin end of the cable to the computer; then tighten the screws on the sides of the connector.



3. Plug the 36-pin end of the cable into the scanner's interface connector. Then squeeze the wire clips together until they lock in place on both sides.



Understanding how SCSI interfaces work

For some PCs, you must first install a SCSI board in your computer. Then follow the directions below to connect your scanner and computer. All Macintosh computers have built-in SCSI ports; you do not need to install a SCSI board. Follow the directions below to connect the scanner to your PC or Macintosh.

SCSI connections

The SCSI interface allows you to connect up to eight devices, including the computer, in what is called a “daisy chain” arrangement. Only the first SCSI device in a daisy chain is connected to the computer; each of the other devices is connected to the previous device.

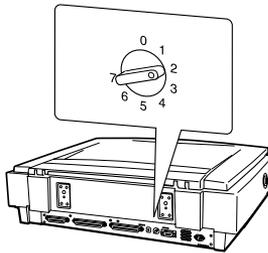
Each device has a SCSI ID number: the computer is usually number 7, and each of the other devices must have a different number between 0 and 6. Also, the first device and the last device in the chain (not including the computer) must have a terminator. No other device can have a terminator or if a terminator does exist, it must be turned off. The scanner has two 50-pin SCSI connectors and a built-in terminator that can be turned on or off.

If you connect the scanner directly to the Macintosh, you need a SCSI cable with a 25-pin connector on one end (for the computer) and a 50-pin connector on the other end (for the scanner). If you connect the scanner to another SCSI device, use a SCSI cable with 50-pin connectors on both ends.

SCSI ID number setting

The factory-set SCSI ID of the scanner is 2. The computer is usually ID number 7. If you are going to add the scanner to a system in which one of your SCSI devices already has a SCSI ID of 2, change the ID number of the scanner to an unused number as described below.

1. Locate the SCSI ID rotary switch on the rear panel of the scanner.



2. To change the SCSI ID, turn the dial to the desired number.

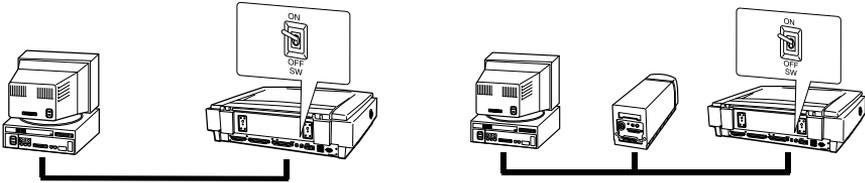


Caution:

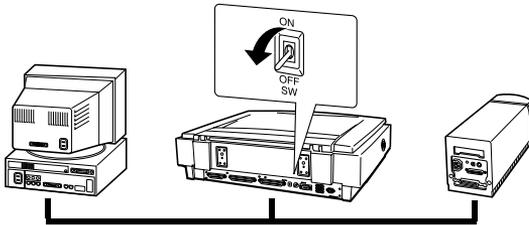
Do not set the SCSI ID to an ID number that is already assigned to another device. The computer, scanner, and other devices will not function properly.

Terminator

The scanner has a built-in terminator. If the scanner is the only SCSI device you connect to your computer or if it is the last device in the daisy chain, leave the internal SCSI terminator turned on. It is on if the switch is up.



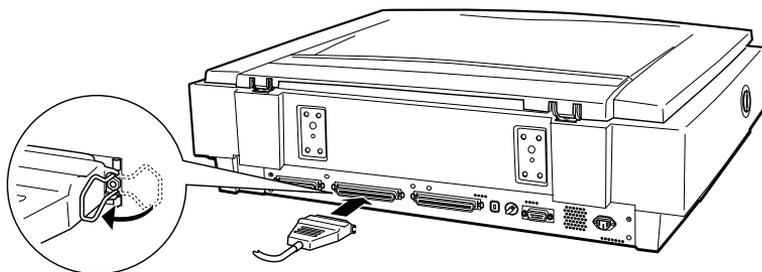
If the scanner is in the middle of a daisy chain, turn the terminator switch off.



Connecting the scanner to your computer or another SCSI device

Connect the scanner as follows:

1. Make sure that the scanner, the computer, and all other SCSI devices are turned off and unplugged from the power source.
2. Connect the 50-pin end of the cable to either the top or bottom SCSI connector of the scanner; then squeeze the wire clips together until they lock in place on both sides.



3. Connect the other end of the cable to the SCSI port of your computer or another SCSI device.

Note:

- The SCSI port of the Macintosh is the larger port with the SCSI icon  over it.*
 - If you are connecting the scanner to a SCSI device other than the computer, use a cable with 50-pin connectors on both ends.*
4. Connect the power cables of your computer, scanner, and other external SCSI devices.
 5. Always turn on the scanner and other external SCSI devices before you turn on your computer.

Power-on sequence

Follow these instructions each time you turn your computer and SCSI devices on.

If you have an internal hard disk, turn on the scanner and any other SCSI devices you plan to use. Wait a few seconds; then turn on the computer.

If you have an external hard disk, turn on the scanner, external hard disk (which should be first on the daisy chain), and any other SCSI devices you plan to use. Wait a few seconds; then turn on the computer.

SCSI devices in the middle of the daisy chain may be left off if you don't use them.

Installing the Scanner Software

Now that you have connected the scanner to your computer, the next thing to do is install your scanner software. Follow the instructions in the *EPSON TWAIN Pro User's Guide*. Then read Chapter 2, "Scanner Basics," before your first scan.

Besides the scanner software, your GT-12000 scanner also comes with the PageManager software which gives you extra control over scanning and scanned images, especially when using the Auto Document Feeder. See page 3-21 for installation instructions.

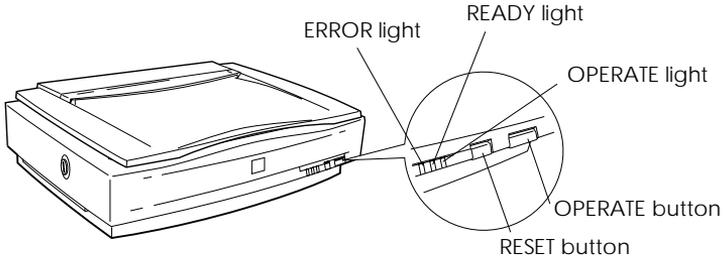
Chapter 2

Scanner Basics

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Lights and Buttons

The scanner has three indicator lights and two buttons.



OPERATE light (green)

Comes on when the scanner is turned on.

READY light (green)

Comes on when the scanner is ready to scan images. This light flashes during scanning. When an error occurs, the combination of this light and the ERROR light indicate the type of error as shown in the table on the next page.

ERROR light (red)

Comes on when an error occurs. Along with the READY light, this light indicates the type of error.

OPERATE button

Turns the scanner on and off.

RESET button

Returns the scanner to operating status after an error occurs.

Note:

- ❑ *Pressing the Reset button during scanning stops the scanner and may cause an error in the scanning software.*

- ❑ *The Reset button may not work if two computers are connected to the scanner and the computer with the bidirectional parallel interface is not turned on.*

Scanner errors

If an error occurs, the scanner stops operating and the READY and ERROR lights show the type of error. See page 4-2, “Determining the Type of Error,” for details.

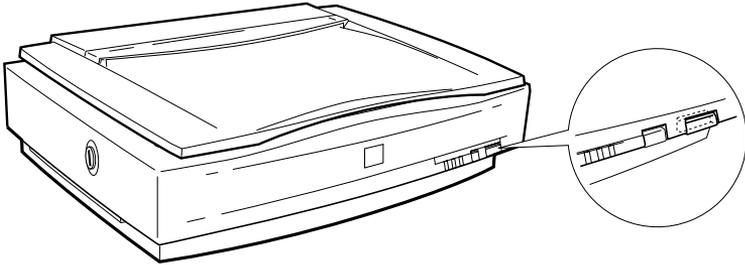
ERROR light	READY light	Error type
On	On	Command error
Flashing	Off	Interface error
Flashing	Flashing	Fatal error
Off	Off	Option error

Scanning

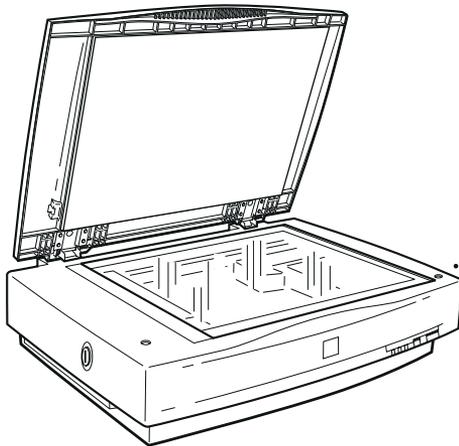
Before scanning a document:

Remember to respect the rights of copyright owners. Do not scan published text or images without first checking the copyright status.

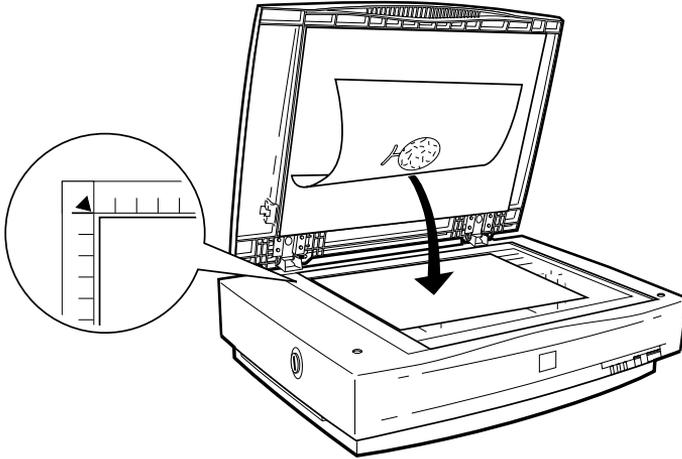
1. Turn on the scanner by pressing the OPERATE button. The OPERATE light comes on.



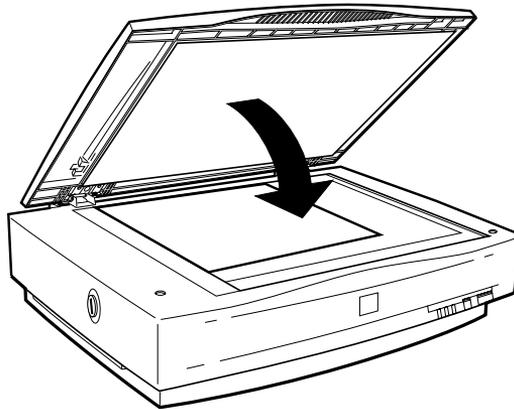
2. Turn on the computer and make sure that the scanner's READY light is on. Open the document cover.



3. Place the document on the document table, with the side to be scanned down. Make sure that the document is aligned in the top-left corner (when facing the inside of the cover).



4. Close the document cover gently so that the document does not move.

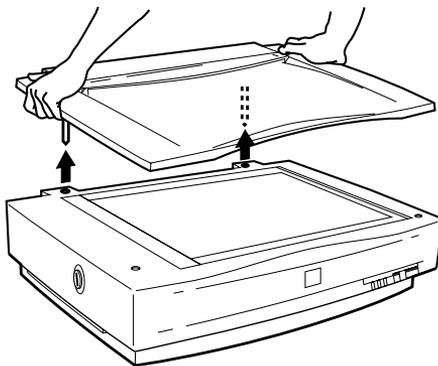


Note:

- ❑ *Make sure that the document is flat against the glass surface so that the image is properly focused. Also make sure to close the document cover. This prevents interference from external light.*
 - ❑ *Always keep the document table clean. See “Troubleshooting and Maintenance,” Chapter 4, for information on cleaning the scanner.*
 - ❑ *Do not leave photographs on the document table for an extended period of time; they may stick to the glass.*
 - ❑ *Do not place heavy objects on top of the scanner.*
5. Open the scanning software, make your settings, and scan according to the directions in Chapter 2, “Scanning With Your Software,” of the *EPSON TWAIN Pro User’s Guide*.

Removing the Document Cover for Oversized Documents

For thick documents or other materials, you can remove the document cover. To do this, hold the back of the document cover behind the hinge and lift straight up.



Note:

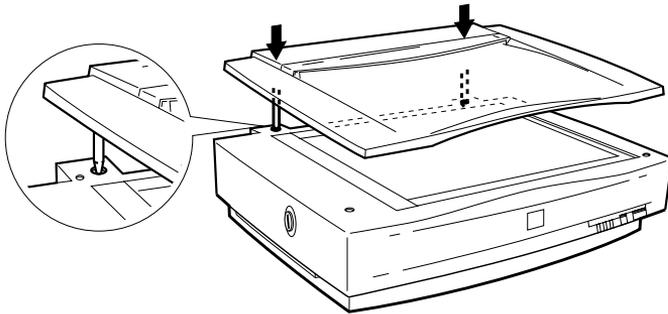
When scanning with the cover removed, make sure you cover any exposed areas of the document table to prevent interference from external light.



Caution:

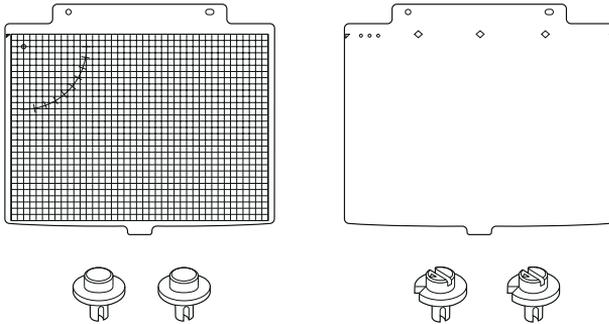
Do not force the cover off the scanner or lift the cover from in front of the cover hinge. This can cause damage to the cover.

Reattach the document cover by pushing straight down on the back of it until it clicks into place.



Using the Document Guide

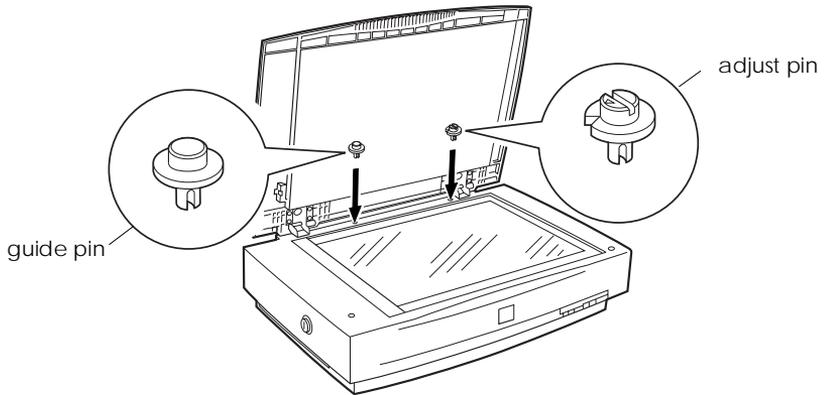
Make sure you have everything shown below, before reading this section.



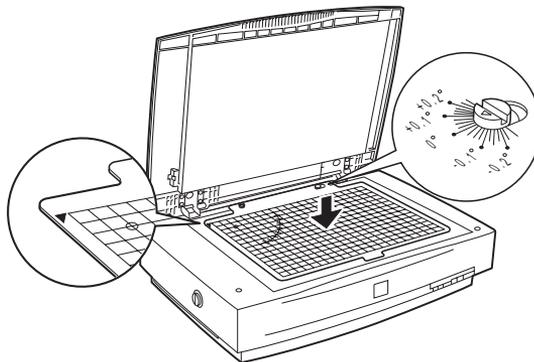
During the scanning operation, the position of the optical reader shifts very slightly as it scans from one side to another. This is normal, and many scanners include a feature to adjust for this shift. This scanner comes with the document guide, which allows you to make incremental changes to the angle of the document to correct for any slight shifts in the scanning process.

There are a few ways to use the document guides, as described in the following pages. If you need to be precise when scanning, use one or both document guides to make the most precise scans possible.

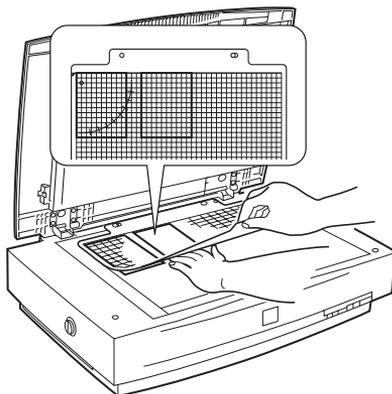
1. Install the pins in the scanner's screw holes through the document guide's holes. The guide pin screws into the left hole and the adjust pin screws into the right hole.



2. Lay the grid document guide on the document table with the document guide holes over the screw holes in the scanner. Make sure the larger document guide hole is on the right (when facing the inside of the cover).



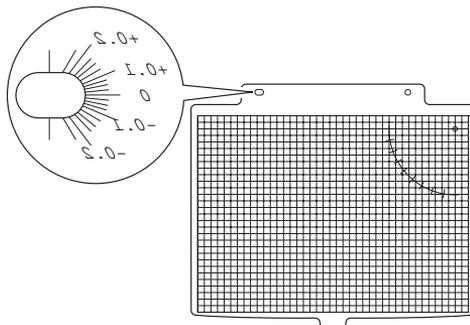
3. Lift up the document guide and insert your document, image, or picture under the guide. Align your document with the guides grid lines. Repeat this step for every document you want to scan, placing one document next to another.



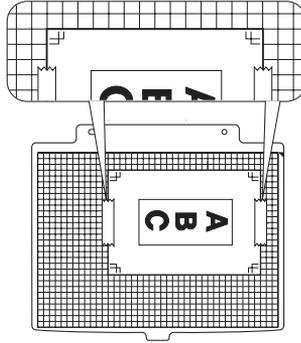
4. Close the cover and scan according to the directions in your software manual.

You can also use the document guide according to the directions below, which are helpful if you find that your document slips or doesn't stay aligned using the above method. The method below requires tape.

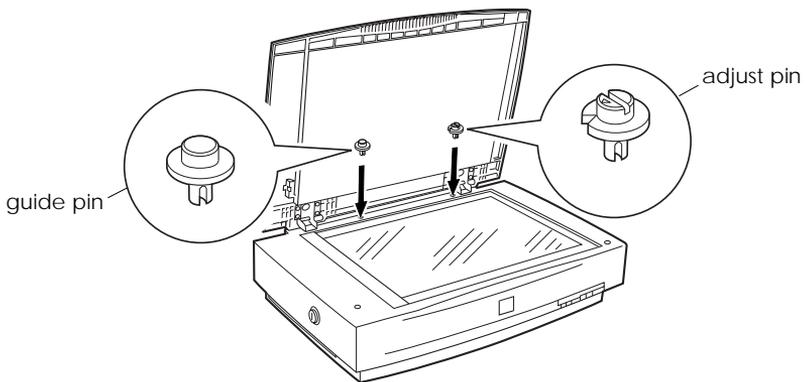
1. Lay the grid document guide upside down on a flat surface, the long hole will be to the left.



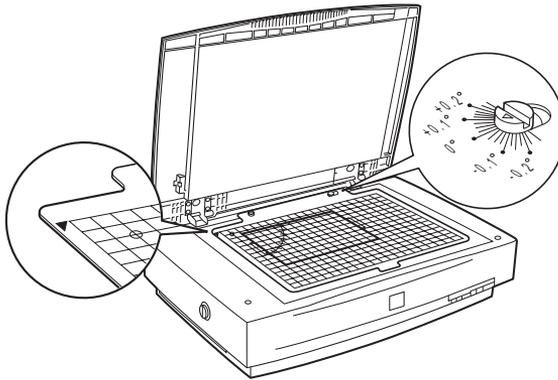
2. Lay your document on the guide with the side to be scanned facing up. After aligning the document to the proper position, use the tape to secure the document in place. Repeat this step for every document you want to scan, placing one document next to another.



3. Install the pins in the scanner's screw holes through the document guide's holes. The guide pin screws into the left hole and the adjust pin screws into the right hole.



4. Turn the document guide over, and lay it on the document table with the document guide holes over the screw holes in the scanner. Make sure the larger document guide hole is on the right and your document faces down.



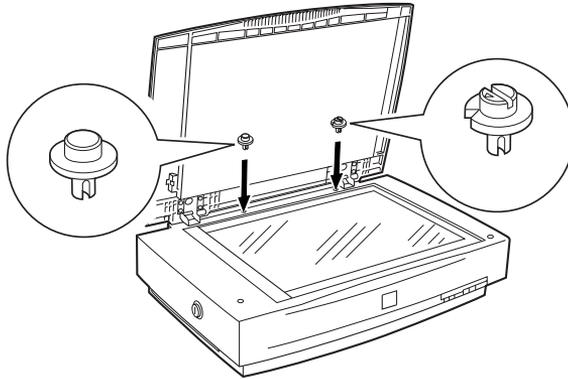
5. Close the cover and scan according to the directions in your software manual.

Note:

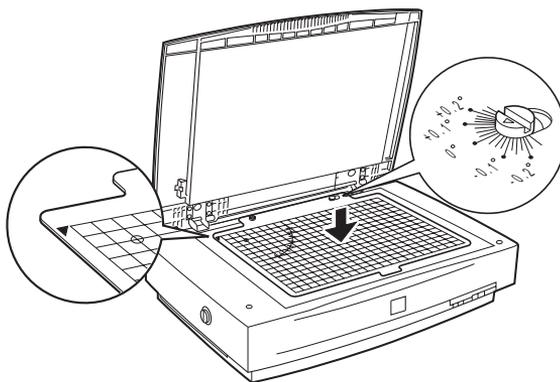
If the scanned image appears slanted, turn the adjust pin using a screwdriver to correct the angle of the document.

The third, and probably most precise way to use the document guides is described below. This method also requires tape.

1. Install the pins in the scanner's screw holes through the document guide's holes. The guide pin screws into the left hole and the adjust pin screws into the right hole.



2. Lay the grid document guide on the document table with the document guide holes over the screw holes in the scanner. Make sure the larger document guide hole is on the right (when facing the inside of the cover).



3. Open EPSON TWAIN Pro as described in your software manual, make the following settings and click Preview:

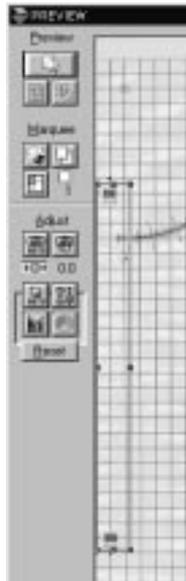
Document Source: Flatbed

Image Type: 256 Grayscale

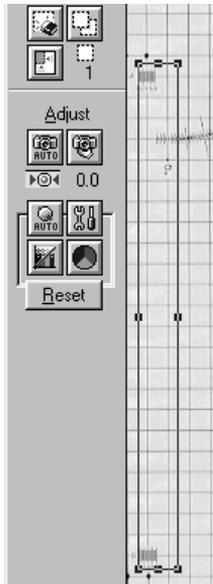
Destination: LineWork Scan

Resolution: 800 dpi

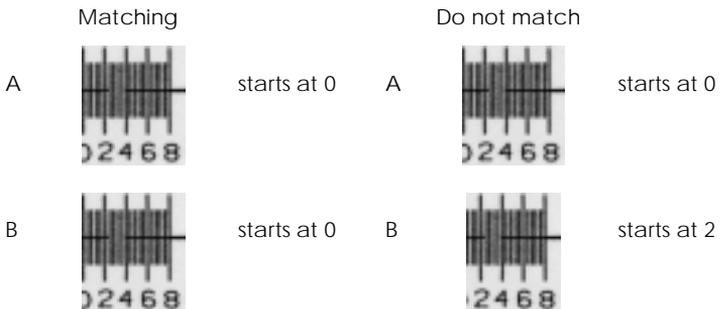
4. Make a marquee in the preview window to include the document guide's scale A and B, and click Zoom Preview.



5. Move the marquee to match its left edge with the left edges of the scales.



6. Click the Scan button.
7. Compare the left edges of the scales on the scanned image; the starting points of the scales should match exactly. If both scales start at the same line (for example 0), skip to step 11. Otherwise go to the next step.



- See the left edges of the scales of the scanned image. Every line of the scale that is missing is equal to 0.4 for mathematical purposes. Then calculate the adjustment angle using the following equation.

The adjusting angle = (scale A - scale B) / 4

For example:

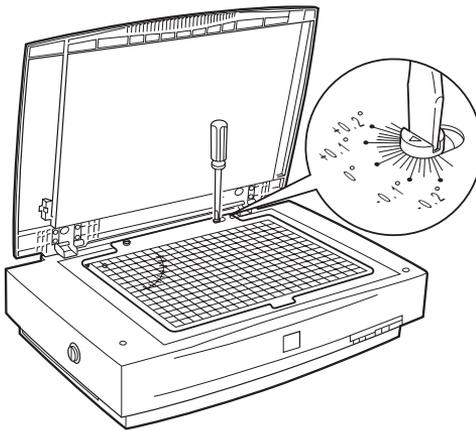
If scale A starts at line 0, then $0 \times 0.4 = 0$; the value for scale A = 0

If scale B starts at line 2, then $2 \times 0.4 = 0.8$; the value for scale B = 0.8

$$(0 - 0.8)/4 = -0.2$$

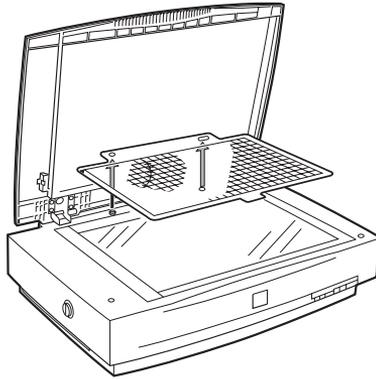
The angle you need to adjust the adjust pin = -0.2

- Turn the arrow on the adjust pin to the number indicated by the calculated result (-0.2 in the example above).

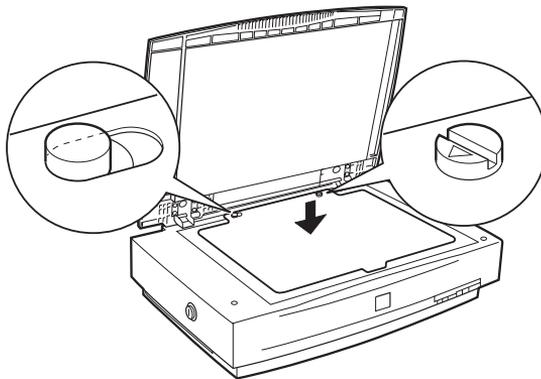


- To confirm this angle, repeat steps 3 to 8. EPSON recommends you record the adjust pin's position for future reference.

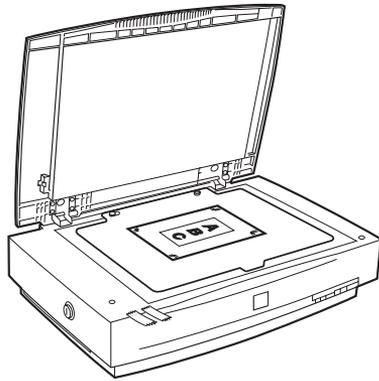
11. Remove the document guide.



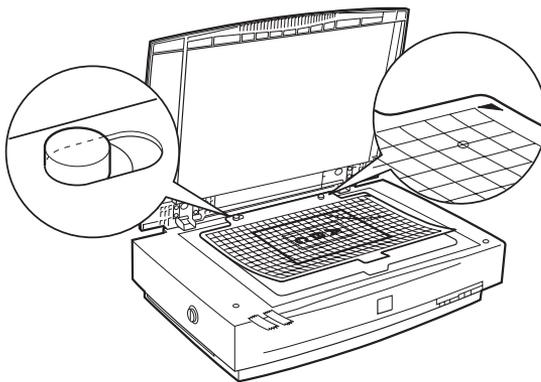
12. Lay the clear document guide on the document table with the document guide holes over the screw holes in the scanner. Make sure the larger document guide hole is on the right when facing the inside of the cover.



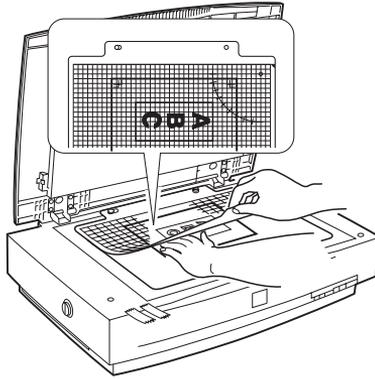
13. Lay your document on the clear document guide with the side to be scanned facing up.



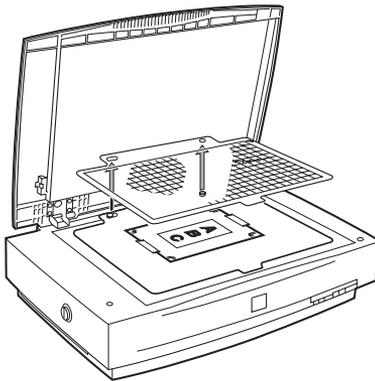
14. Lay the grid document guide on top of your document, with the document guide holes over the screw holes in the scanner. Make sure the larger document guide hole is on the left when facing the inside of the cover.



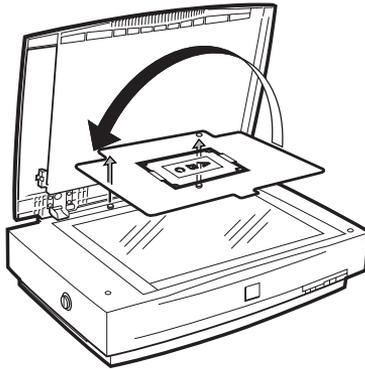
15. Make sure your document is aligned with the grids on the grid document guide. After aligning the document to the proper position, use tape to secure the document in place. Repeat this step for every document you want to scan, placing one document next to another.



16. Remove the grid document guide.



17. Turn the clear document guide over, and lay it on the document table with the document guide holes over the screw holes in the scanner. Make sure the larger document guide hole is on the right and your document faces down.



18. Close the cover and scan according to the directions in your software manual.

Chapter 3

Options

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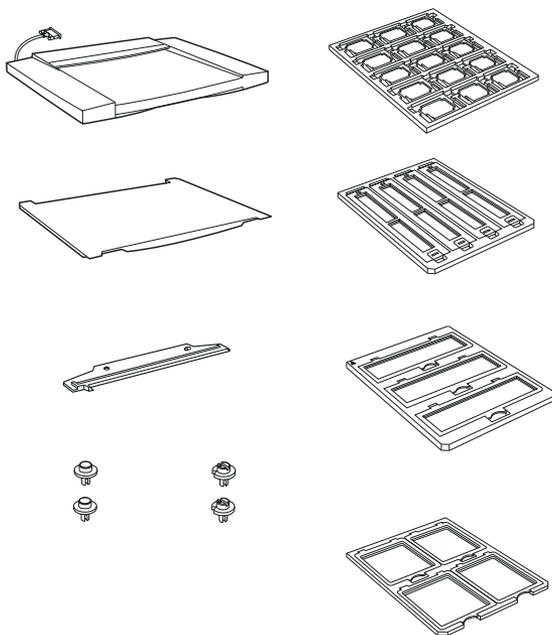
For information on the Transparency Unit, see the following.
For information on the Auto Document Feeder, see page 3-16.

The Transparency Unit

The Transparency Unit (B81310*) enables EPSON scanner owners to scan transparencies, strips of negatives or positives, and slides in full color. You can also scan normal reflective (paper) documents with the Transparency Unit installed.

Unpacking the Transparency Unit

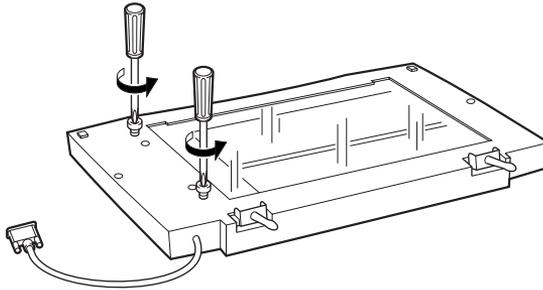
When you first open the package, make sure that all the following items are included. Contact your EPSON dealer if anything is missing or damaged.



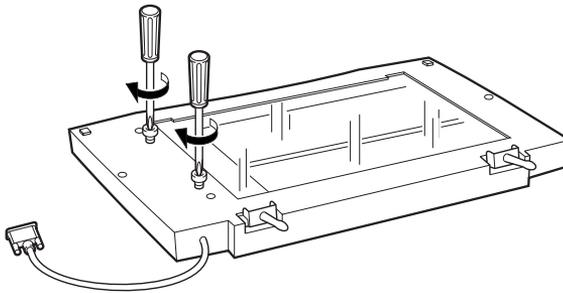
Removing the shipping screw

To prevent damage during shipping, a shipping screw is attached to the Transparency Unit. Remove this screw before you attempt to use the Transparency Unit.

1. Turn the unit so the glass side faces up.
2. Remove both shipping screws as shown below.



3. Secure the screws you just removed in the storage holes towards the center of the scanner, as shown below.



Caution:

If either screw is left in an outer hole while using the Transparency Unit, the unit may be damaged.

Note:

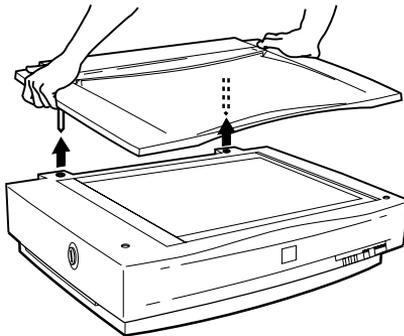
- ❑ *Before transporting the scanner, remove the Transparency Unit and replace the shipping screws in the outer, transportation holes.*

- ❑ *If the unit's lamp assembly is not in its home position, you cannot replace the shipping screws. If this is the case, reattach the unit to the scanner, close the unit, and turn the scanner on; the unit's lamp assembly then returns to its home position. Then turn off the scanner and remove the Transparency Unit.*

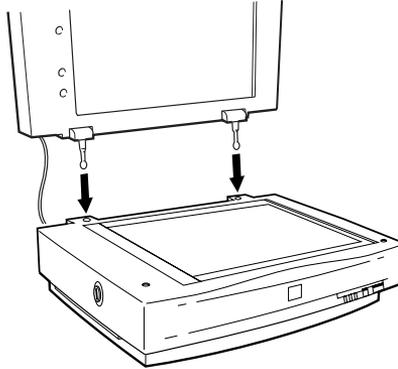
Installing the Transparency Unit

Follow the steps below to install the Transparency Unit.

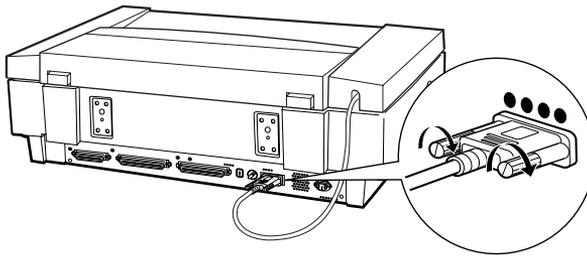
1. Make sure the scanner is turned off and unplug the power cable from the scanner.
2. Remove the document cover from the scanner by holding the cover behind the hinge and lifting the back of the cover straight up.



3. Align the pins of the unit with the holes of the scanner, and then lower the unit until it rests securely on the scanner with the pins in the holes.



4. Close the Transparency Unit.
5. Connect the Transparency Unit's connector to the option connector at the back of the scanner.



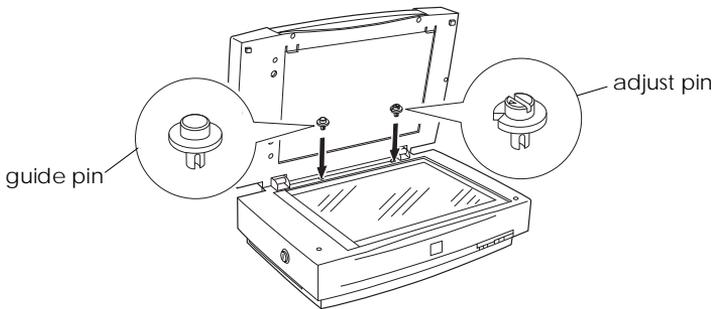
Caution:

Do not put heavy objects on the Transparency Unit; otherwise the unit may be damaged.

Installing the transparency guide

Follow the steps below to install the transparency guide, which is required to use all of the film holders and to scan transparencies.

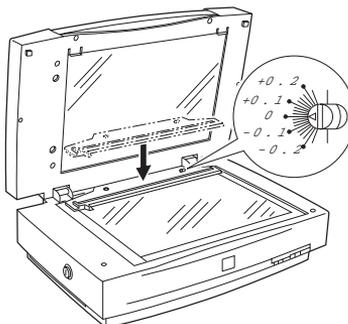
1. Open the Transparency Unit.
2. Insert the guide pin and the adjust pin. Make sure the adjust pin's arrow faces directly towards the center of the guide pin.



Note:

These pins are the same as the ones provided with the scanner, so you do not need to change them if they are already installed.

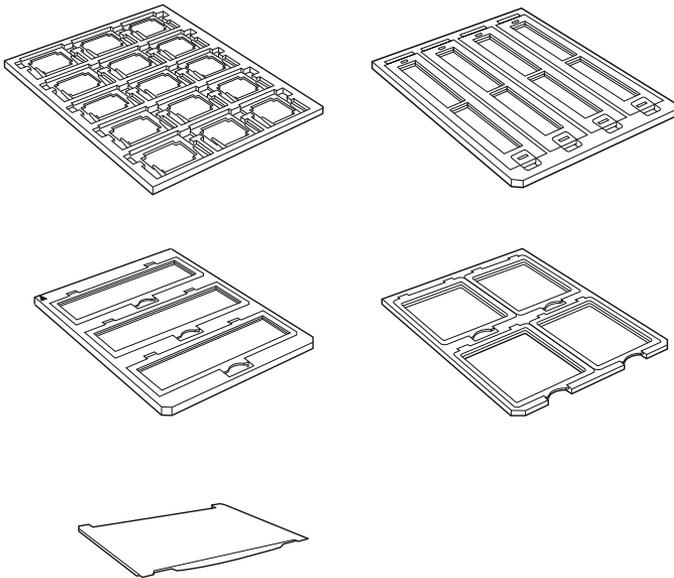
3. Place the transparency guide on the scanner's document table as shown below.



To scan slides or strips of negative or positive film, see the following section. To scan transparencies, see page 3-14. To scan normal documents with the transparency guide installed, see page 3-13.

Using the film holders and reflective document mat

Four film holders for scanning film, and a reflective document mat for scanning normal paper documents are included with this unit. To use the guides or mat, see the appropriate section in the following pages.



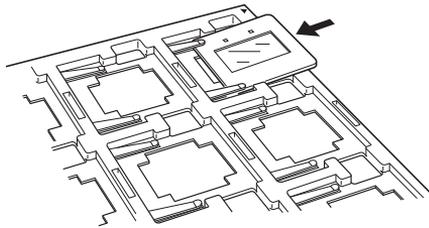
You can easily scan 35 mm slides, strips of 35 mm negative or positive film, and 4 × 5 inch (102 × 127 mm) film using the film holders. See page 3-13 for information on using the document mat to scan normal documents with the Transparency Unit installed.

Note:

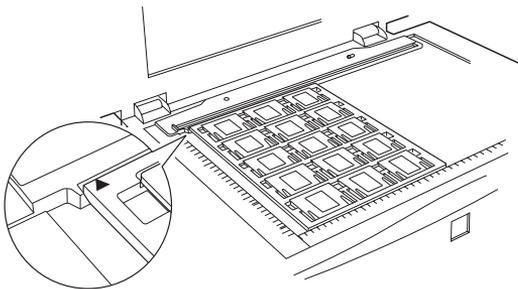
- ❑ *Wipe the glass of the Transparency Unit, the scanner's document table, and the narrow window near the mounting bracket with a soft, dry cloth before scanning transparencies.*
- ❑ *Your scanner software automatically controls the operation of the Transparency Unit.*

Loading 35 mm slides

1. Load slides in the 35 mm slide holder face down, as shown below. Repeat this step for all the slides you scan.

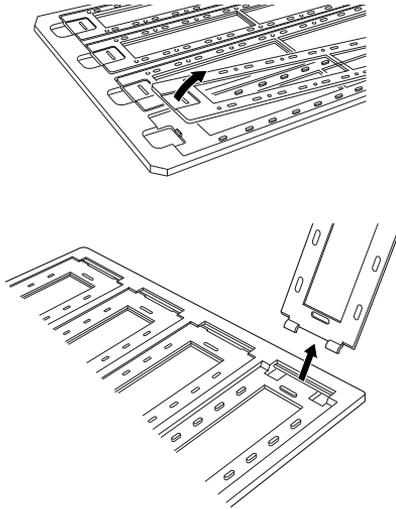


2. Place the slide holder on the document table. Align the slide holder with the notch on the transparency guide, as shown below.

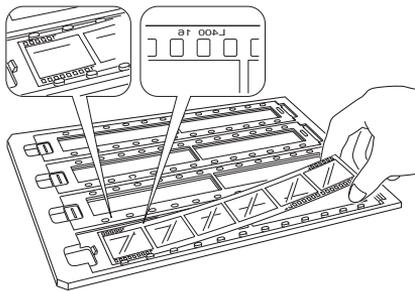


Loading strips of negative or positive film

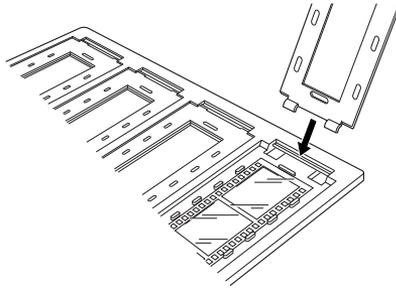
1. Place the 35 mm filmstrip holder on a flat surface, and remove a strip cover.



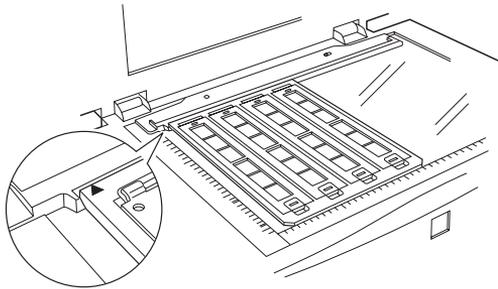
2. Insert a strip of film in the filmstrip holder face down.



3. Replace the strip cover that you removed in step 1. Repeat steps 1 through 3 for all the filmstrips you scan.

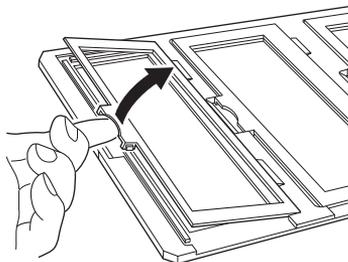


4. Place the filmstrip holder on the document table and align it with the notch on the transparency guide as shown below.

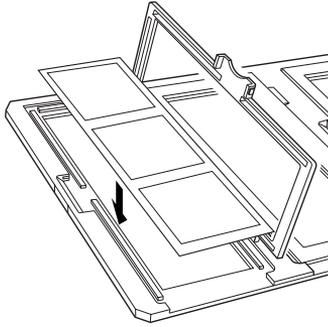


Loading medium format film

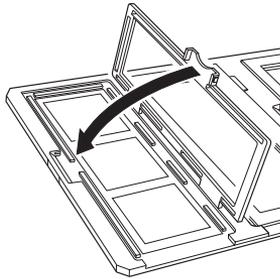
1. Place the medium format film holder on a flat surface, and open a strip cover.



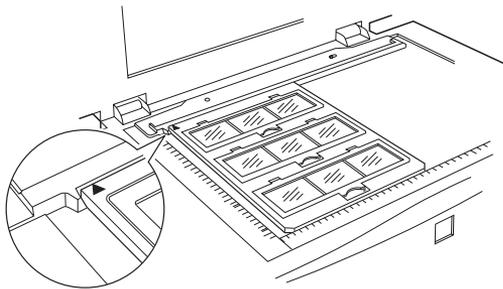
2. Insert the film in the holder face down.



3. Close the cover. Repeat steps 1 through 3 for all the film you scan.

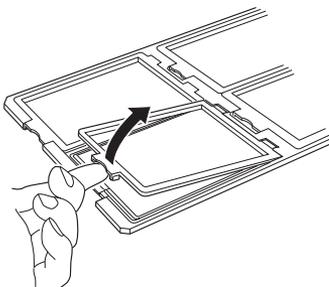


4. Place the holder on the document table, and align it with the notch on the transparency guide, as shown below.

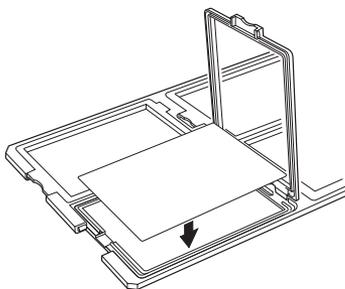


Loading 4" × 5" film

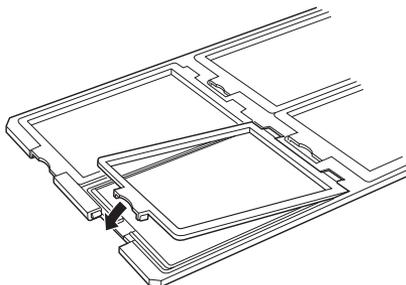
1. Place the 4" x 5" film holder on a flat surface, and open a cover.



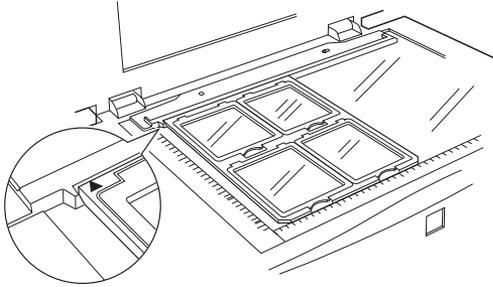
2. Insert the film in the holder face down.



3. Close the cover. Repeat steps 1 through 3 for all the film you scan.



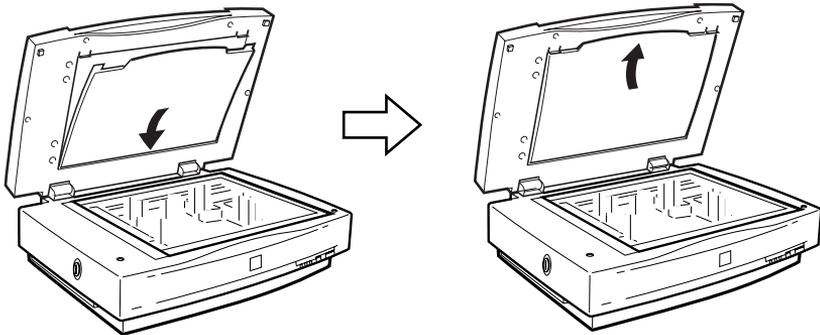
4. Place the holder on the document table, align it with the notch on the transparency guide, as shown below.



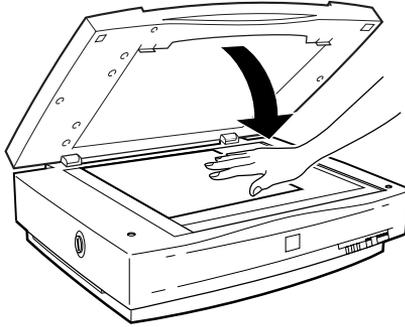
Loading normal documents with the Unit installed

To scan normal documents with the Transparency Unit installed, always insert the reflective document mat included with this unit as described below.

1. Open the Transparency Unit and remove the transparency guide from the scanner's document table if necessary.
2. Slide the mat into place and insert the tabs into the slots on the Transparency Unit.



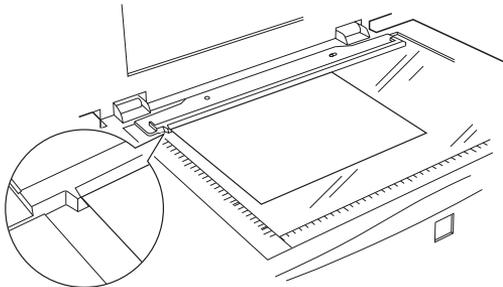
3. Place your document on the document table and close the Transparency Unit.



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

Placing transparencies and oversized film

To place transparencies or film that is larger than the guides on the document table, put the transparency or film directly on the document table and align it with the notch on the transparency guide, as shown below. The maximum film size is 290×420 mm.



If the reflective document mat is installed in the Transparency Unit, remove it. Then, close the Transparency Unit.

Note:

Make sure the unit is completely closed; otherwise, an option error results and you cannot scan the document.

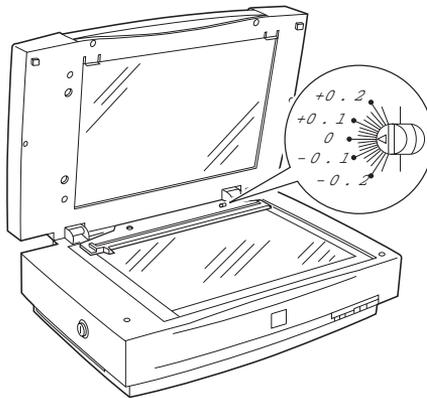
If a color stripe appears when scanning film

The optical phenomenon where color stripes appear is called Newton's ring. This occurs when two, very thin membranes such as film surfaces or soap bubble surfaces meet.

If this phenomenon occurs, try scanning the film upside down. This may eliminate the effect of Newton's ring.

Adjusting the angle of the transparency guide

If you find that your scanned image's edges are being scanned at a slight angle, adjust the angle of scanning by turning the adjust pin. Most scanners scan at an angle due to the movement of the carriage. The direction and degree you should turn the adjust pin depends on your individual scanner and the placement of the document to be scanned. You may want to experiment with this feature to determine the best angle. If you are still unsatisfied after experimenting with the adjust pin, see "Using the Document Guide" on page 2-8 for information on how to precisely find the angle you need.

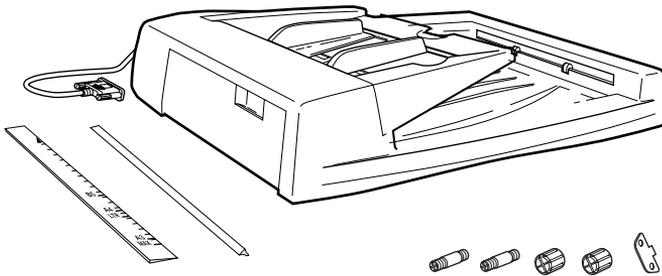


The Auto Document Feeder

The Auto Document Feeder (B81311*) allows you to automatically load multiple-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 Auto Document Feeder

When you first open the package, make sure that the following items are included. Contact your EPSON dealer if anything is missing or damaged.



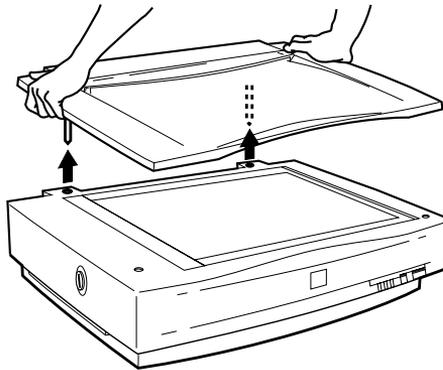
Installing the Auto Document Feeder

Before installing the Auto Document Feeder, be aware that:

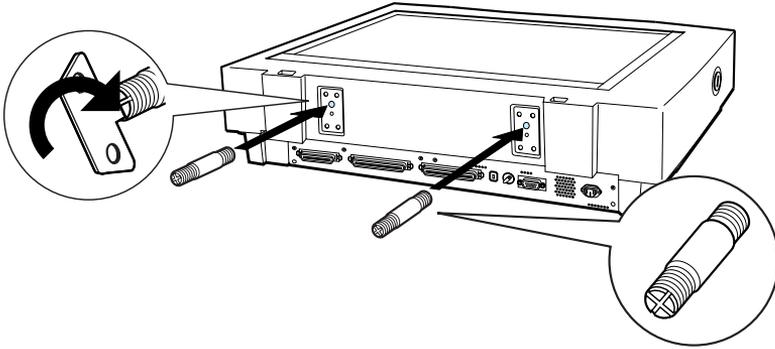
- ❑ The Auto Document Feeder is heavy, so you may need to have someone help you lift it.
- ❑ The Auto Document Feeder is large, so you should clear the space around the scanner.

Follow the steps below to install the Auto Document Feeder on your EPSON scanner.

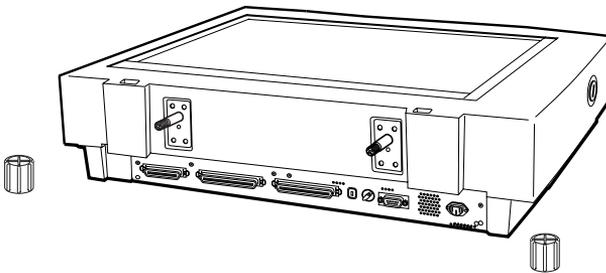
1. Make sure your scanner is turned off, and unplug the scanner's power cable.
2. Remove your scanner's document cover by holding the cover behind the hinge and lifting the back of the cover straight up.



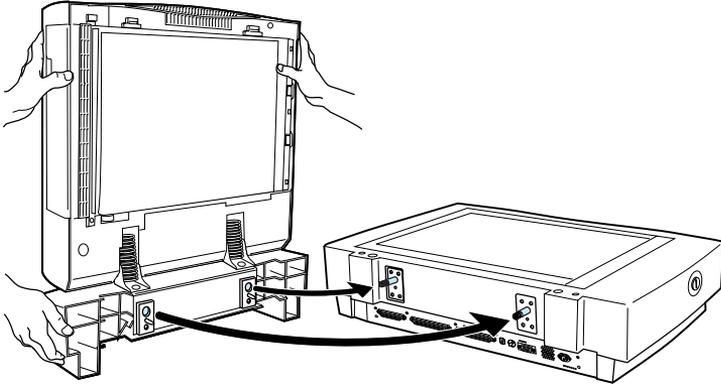
3. Insert the installation screws that come with the scanner into the holes in the back of the scanner and secure them as shown below.



4. Place the two knobs that are enclosed with the Auto Document Feeder beside the scanner.



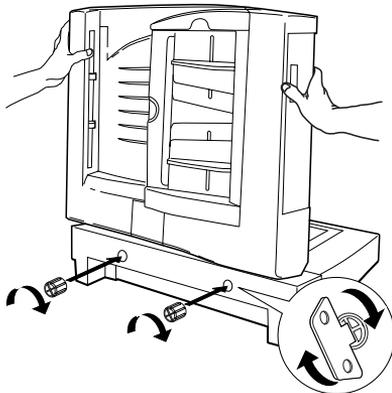
5. Align the screws with the holes of the Auto Document Feeder. Slide the holes of the Auto Document Feeder over the screws.



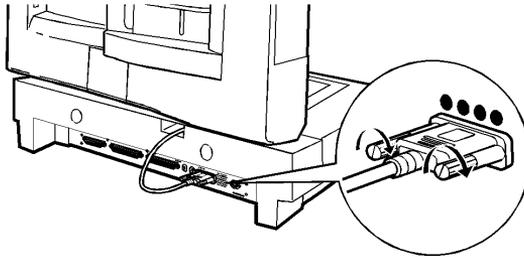
Note:

The Auto Document Feeder is heavy, so you may need to have someone help you lift it.

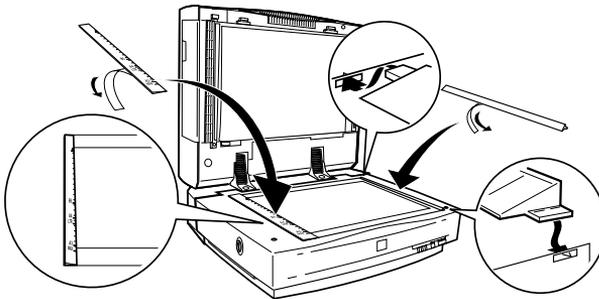
6. Secure the knobs to the ends of the screws.



7. Attach the Auto Document Feeder's connector to the scanner's option interface.



8. Peel off the backing from the stopper and from the paper out support, which are provided with the Auto Document Feeder. Then attach the stopper and paper out support to the scanner as shown below.



9. Close the Auto Document Feeder.

Installing the PageManager software

The Presto! PageManager software that comes with the GT-12000 scanner provides you with many interesting and useful features including software control of the scan direction so that both sides of a double-side scan come out the same direction. To install the PageManager software:

For Windows 95; Insert the CD-ROM into the CD-ROM drive and click Start and Run. Then type D:\SETUP.EXE, and press the Enter key. Follow the on-screen instructions to complete installation.

For Macintosh; Insert the CD-ROM into the CD-ROM drive and double-click the Presto! PageManager Installer icon. Follow the on-screen instructions to complete installation.

For details about using PageManager, open online help from the Help menu in PageManager.

Loading paper in the Auto Document Feeder

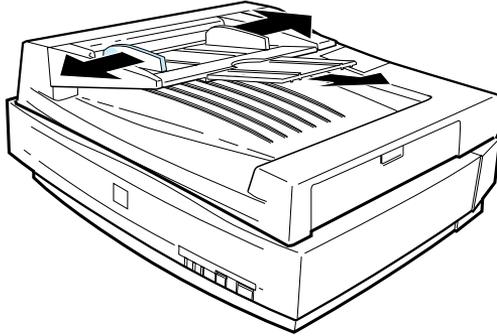
Your Auto Document Feeder can automatically load up to 30 sheets of the following paper sizes (based on a paper weight of 17 lbs and a stack thickness of 6.0 mm or less):

Paper size	Direction
A3, LD, B4, Legal, A4, Letter, B5, A5, 140 × 148 mm	Portrait
A4, Letter, B5, A5	Landscape

Use the PageManager software that came with your GT-12000 scanner.

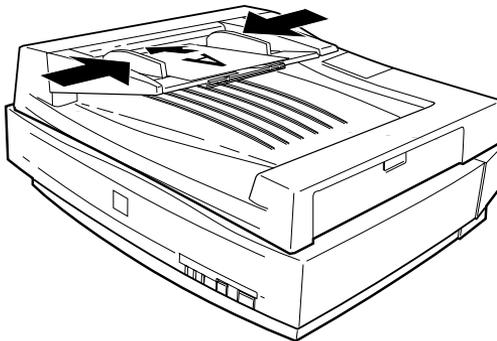
Follow the steps below to load paper in the Auto Document Feeder.

1. Slide the edge guides all the way to the outside.

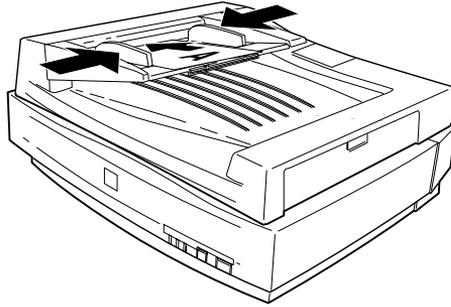


2. Insert the paper stack into the Auto Document Feeder until it meets resistance. Make sure that the side you want to scan faces up. Then adjust the edge guides to match the size of your paper.

If your document is in portrait orientation (meaning the top and bottom edges are shorter than the side edges), insert the document with the bottom edge closest to the document feed path.



If your document is in landscape orientation (meaning the top and bottom edges are longer than the side edges), insert the document with the left edge closest to the document feed path.



Note:

- Make sure the side of document you want to scan faces up.*
- If you load multiple pages in the Auto Document Feeder, the Feeder will feed from the bottom.*
- To automatically scan both sides of a document, make the Double-side setting in EPSON TWAIN Pro.*

Loading documents manually

You can load documents manually even when the Auto Document Feeder is installed.

To load a document manually, lift the Auto Document Feeder and place the document on the document table. Then lower the Automatic Document Feeder and scan the document as described on page 2-4.

Note:

- ❑ *Opening the Auto Document Feeder while scanning is in progress will result in an option error and may result in a paper feeding error.*
- ❑ *Always close the Auto Document Feeder before scanning or using the feeder.*

Scanning from the Auto Document Feeder

The scanning instructions are divided into two sections; read “Scanning an entire image” to scan an entire document or image, or read “Scanning only part of an image” to scan only a certain part of an image or document.

Scanning an entire image

You do not need to use the preview feature when scanning a full document or image. The scanner automatically finds and scans the whole image. Follow the steps below to scan an image or document.

1. Load paper in the Auto Document Feeder as described on page 3-22.
2. Start the PageManager software and select Acquire from the File menu.

3. Determine the direction of scanning using PageManager. For details on using PageManager, see the online help that comes with the software.
4. Make your settings in EPSON TWAIN Pro and click the Scan button. See Chapter 3 of the *EPSON TWAIN Pro User's Guide* for details on making EPSON TWAIN Pro settings. Then click Scan.

Scanning only part of an image

To scan just a part, or parts of an image, follow the steps below.

1. Load paper in the Auto Document Feeder as described on page 3-22.

Note:

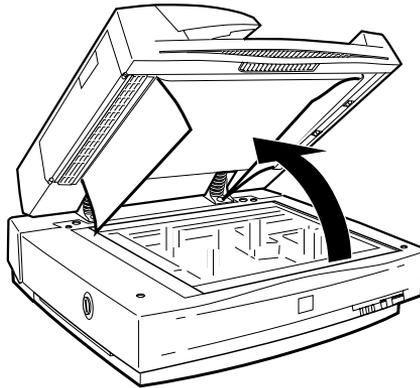
Do not scan more than one page at a time when scanning only part of an image; otherwise the extra pages may not feed properly.

2. Start the PageManager software and select Acquire from the File menu.
3. Click Preview. The document is ejected after previewing.
4. Make a marquee (frame around a certain area) to define the part of the image you want to scan by dragging the mouse pointer over that area. If necessary, make multiple marquees to scan multiple parts of the image. See Chapter 3 of the *EPSON TWAIN Pro User's Guide* for information on making marquees and settings in EPSON TWAIN Pro.
5. Replace the document the same way you placed it in step 1, and close the Document Feeder.
6. Determine the direction of scanning using PageManager. For details on using PageManager, see the online help that comes with the software.

7. Make your settings in EPSON TWAIN Pro and click the Scan button. See Chapter 3 of the *EPSON TWAIN Pro User's Guide* for details on making EPSON TWAIN Pro settings.
8. Click Scan to scan a single marquee, or click Scan All to scan multiple marquees.

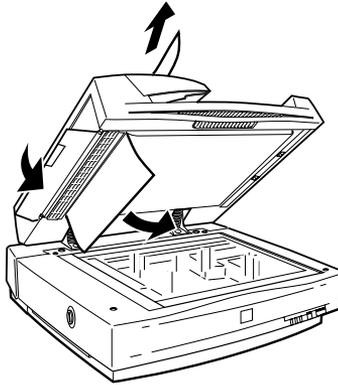
Fixing paper jams in the Auto Document Feeder

If a paper jam occurs, first open the Auto Document Feeder's cover, then determine where the paper jam occurred.



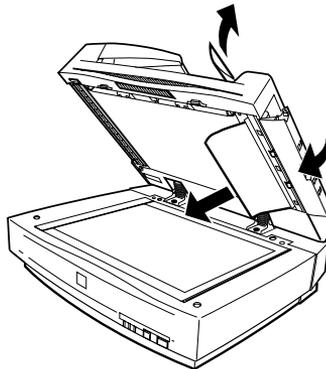
If paper jams at the feeder position:

Open the jam-release cover and slowly pull the jammed paper out of the feeder mechanism. (Be careful not to pull too hard; otherwise the paper may tear, making it more difficult to remove.)



If paper jams at the paper eject position:

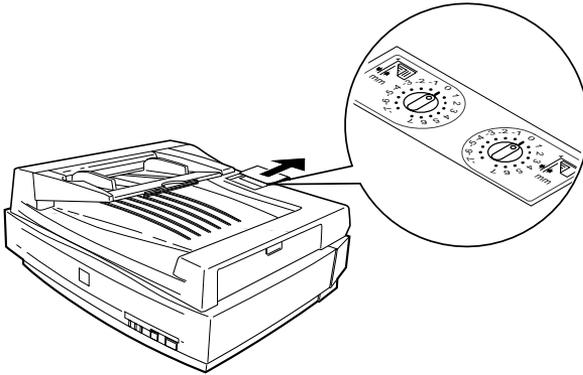
Open the jam-release cover and slowly pull the jammed paper out of the feeder mechanism. (Be careful not to pull too hard; otherwise the paper may tear, making it more difficult to remove.)



After removing the jammed paper, close the Auto Document Feeder cover and reset the scanner by turning it off and on again.

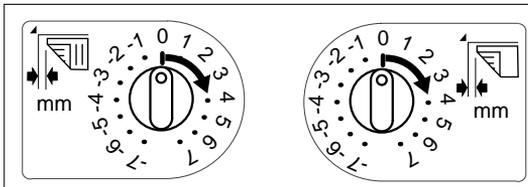
Adjusting the loading position of the Document Feeder

If your document feeds too high or low when using the Auto Document Feeder, adjust the position using the adjustment dial.



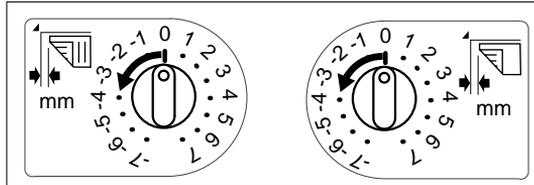
If the upper side of the scanned image is missing

If the document does not feed to the proper position on the document table, turn the dial clockwise to a higher number. The position changes in 1 mm increments.



If the lower side of the scanned image is missing

If the document feeds past the proper position on the document table, turn the dial counterclockwise to a lower number. The position changes in 1 mm increments.



Note:

This problem occurs when the stopper is not installed, or the stopper is not positioned properly on the document table. Make sure the stopper is installed as described on page 3-20 if this problem occurs.

Document specifications

Paper size	Direction
A3, LD, B4, Legal, A4, Letter, B5, A5, 140 × 148 mm	Portrait
A4, Letter, B5, A5	Landscape

Operating condition: 5 to 35° C, 10 to 80% RH

Weight: 50 to 127 g/m² (over 110 g/m², the operating condition is 15 to 25° C, 40 to 70% RH)

Paper quality: High-quality bond or thermal paper

Document type: Documents printed with impact printers, laser printers, or facsimile machines

Document conditions

Make sure of the following before feeding a document:

- 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 may damage the feeder mechanism.
- The document has no folds closer than 8 mm to its edges.
- The document is not a multipart form or bound.
- The document has no rear carbon coating.
- The document has no cut-out areas.

Other precautions

Do not feed photographic sheets or particularly valuable original artwork into this automatic document feeder; misfeeding a document may result in accidental wrinkling or damage.

When you are scanning high-quality color or halftone documents, it is recommended you open the automatic document sheet feeder and scan documents individually.

Chapter 4

Troubleshooting and Maintenance

Determining the type of Error	4-2
Indicator lights	4-2
Problems and Solutions	4-4
Maintaining the Scanner	4-9
Replacing the fluorescent lamps	4-10
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Determining the type of Error

The problems you may have while using the scanner often involve the operation of your software and computer. Problems fall into the following categories:

- Incorrect setup of the interface
- Inappropriate selection of the scanner functions
- Incorrect setup of your computer or software
- Incorrect operation of your software

If an error occurs, see the scanner's indicator lights and the table below to determine what kind of error it is. Then see the appropriate section below the table to determine the correct solution to the error. If the information in the appropriate section below the table does not help you solve the problem, see "Problems and Solutions" on page 4-4.

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

Indicator lights

If an error occurs, the scanner stops operating and the READY and ERROR lights show the type of error.

ERROR light	READY light	Error type
On	On	Command error
Flashing	Off	Interface error
Flashing	Flashing	Fatal error
Off	Off	Option error

Command error

The scanner has received incorrect commands from your scanning software.

If this type of error occurs, try to rescan the document. The scanner returns to normal when it receives correct commands. Normally you do not need to restart the scanner.

Interface error

The interface setup is wrong, or the scanner is not properly connected to the computer.

If this type of error occurs, check the interface connection. Then push the RESET button or turn the scanner off and back on.

Fatal error

This indicates one of the following problems:

- One or more fluorescent lamps need to be replaced.
- The transportation lock lever is not released.
- The scanner is broken.
- There is a problem, such as an open cover, with the optional transparency unit or the optional automatic document feeder.

Check that the transportation lock lever is released and check any installed options, then push the RESET button. If the scanner still does not operate properly, try turning the scanner off and then back on. If the scanner still does not operate properly, or if this error occurs repeatedly, consult your dealer.

Option error

This indicates a problem such as a paper jam with an installed option.

Check any installed options and carefully remove any jammed paper, if necessary.

Problems and Solutions

The OPERATE light does not come on.

Make sure the power cable is correctly plugged into the scanner and the power outlet.

The READY light does not come on.

Make sure the scanner is correctly connected to the computer and that the computer is turned on.

The scanner does not start scanning.

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

If you are using the SCSI interface, confirm that the terminator and SCSI ID are correctly set up. See page 1-8.

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 manual.)

The scanner software does not work properly.

Be sure you have correctly installed your software.

Make sure that your computer system meets the requirements, such as the operating system version, specified for your software.

Also, make sure that your software supports this model of scanner and that you correctly installed the software. (See your software manuals.)

Confirm that the computer has enough memory for your software. If you are running other software at the same time, using RAM resident programs, or have many device drivers, the computer may not have enough memory left. (See your software and computer manuals.)

The entire image is distorted or blurred.

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.

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

Part of the image is distorted or blurred.

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

**Caution:**

Do not place heavy objects on the document table.

The edges of the document are missing from the scanned output.

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.

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.

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.

Check that the document is placed flush against the document table.

Make the brightness setting in your software darker.

The image is too dark.

Adjust the brightness with your software. Also check the brightness and contrast values of your display screen.

Straight lines in the image are jagged.

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

The image does not look the same as the original.

Try different combinations of image settings using your scanner software.

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 and computer manuals.)

If you are importing a scanned-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.

If this happens in your printed image only, your printer or its print head is probably malfunctioning. (See your printer manual.)

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

When halftoning is used, textured patterns of dots appear on particular areas of an image.

This is normal. See the explanation of moiré in the *Color Guide*.

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

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.

Check the color matching and color management capabilities of your computer, display adapter, and software. Some computers can change the color palette to adjust colors on your screen. (See your software and computer manuals.)

Exact matching of colors is very difficult. The reason for this is explained in your *Color Guide*. Check your software and monitor manuals for information on color matching and calibration.

Printed colors are different from those in the original image.

Exact reproduction of colors is very difficult. The reason for this is explained in your *Color Guide*. See your software manual or your printer documentation for guidance on color matching.

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

Change the image size settings in your software to resize the printed image. Do not use the size of the image on your monitor to judge the printed size.

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

Check that the printer is properly connected with the computer and is correctly set up. (See your printer manual.)

Check that your software is properly installed and set up for your printer. (See your software manual.)

Maintaining the Scanner

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

Clean the outer case with mild detergent diluted in water.

If the glass of the document table 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 that there is no dust on the glass of the document table. Dust can cause white spots in your scanned image.



Caution:

- ❑ *Be careful not to scratch or damage the glass of the document table, and do not use a hard or abrasive brush to clean it. 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 the mechanism and circuitry.*
- ❑ *Do not spray lubricants inside the scanner.*
- ❑ *Never open the scanner case.*

Replacing the fluorescent lamps

The luminosity of the fluorescent lamps declines over time. If the lamps break or become too dim to operate normally, the scanner stops working and both the READY and ERROR lights flash. When this happens, the lamp assembly must be replaced. For details, contact your dealer.



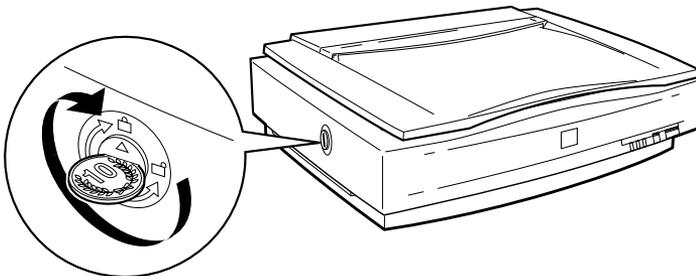
Caution:

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

Transporting the Scanner

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

1. Turn on the scanner and wait until the carriage moves to the home position (the left of the scanner when facing the underside of the cover). Then turn off the scanner.
2. Secure the transportation lock screw to the locked position to secure the carriage.



Note:

If the scanner is broken, the carriage may not automatically return to the home position. If it does not, raise the right of the scanner (when facing the underside of the cover) and hold it up until the carriage comes to rest at the left of the scanner. Then turn the transportation lock screw to the locked position.

Recommended Equipment

Your scanner is sufficient for most scanning needs, but if you are not satisfied with the quality of the images on your monitor or with the speed of image processing, read this section. While it does not contain specific recommendations, it describes various possibilities for improving your scanning system. For further information, contact your dealer or an experienced scanner user.

RAM and hard disk size

Scanned images can use much more memory than text files, so you may need more RAM (Random Access Memory) in your computer and a larger hard disk than you have used previously.

Accelerator boards

In addition to memory, processing speed is important because large files take longer to process than small ones. Therefore, you may want to add an accelerator board to your computer.

Video cards

A video card that is sufficient for text may not be good enough for displaying graphic images, especially in color. If all your scanned images look coarse on your monitor, you may want to upgrade your video card. You will need 24-bit color, also called true color or millions of colors, to make the highest quality image reproductions.

Monitors

The resolution of your monitor, of course, also affects the quality of the image you see. Consider a high resolution monitor if you do precise color work, but first be sure you have the right video card.

File compression software

Many different programs are available to make image files smaller for storage or transmission. For example, they can enable you to store a 3 MB image file on a 1.44 MB floppy disk. Some compression software can compress images and restore them with no loss of data or quality; others compress images more, but the restored file is not exactly the same as the original. The difference between the original and restored files is, however, almost unnoticeable.

Appendix A

Technical Specifications



Scanner Specifications	A-2
Scanning	A-2
Electrical	A-3
Environmental	A-4
Safety approvals	A-4
Source document	A-5
Parallel interface	A-5
SCSI interface	A-6
Initialization Methods	A-7

Scanner Specifications

Scanning

Scanner type:	Flatbed, color
Photoelectric device:	Color CCD line sensor
Effective pixels:	9760 dots by 13760 pixels at 800 dpi, 100%
Document size:	310 mm × 437 mm (12.2 inches × 17.2 inches) A3 or US B size (The reading area can be specified from the software.)
Scanning resolution:	800 dpi (main, sub)
Output resolution:	50 dpi to 3200 dpi in 1 dpi steps Values above 800 are interpolated in the software
Color separation:	RGB color filters on CCD
Reading sequence:	
Monochrome	One-pass scanning
Color line sequence	One-pass scanning (R, G, B)
Zoom:	50% to 200% in 1% steps
Image data:	12 bits in/out
Brightness:	7 levels
Line Art settings:	Fixed threshold Text Enhancement Technology (enable/disable selectable)
Interface:	Bidirectional parallel and SCSI
Light source:	Xe-gas cold cathode fluorescent lamp
Reliability:	100,000 cycles of carriage movements (main unit MCBF)
Dimensions:	Width: 656 mm (25.8 inches) Depth: 458 mm (18.0 inches) Height: 170 mm (6.7 inches)

Weight:

Approx. 20 kg (44.1 lb)

Electrical

	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	1.2 A	0.7 A
Power consumption	Approx. 60W, 75 W maximum with optional unit	

Note:

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

Environmental

Temperature:

Operation 5° C to 35° C (41° F to 95° F)

Storage -25° C to 60° C (-13° F to 140° F)

Humidity:

Operation 10% to 80%, without condensation

Storage 10% to 85%, without condensation

Operating conditions:

Ordinary office or home conditions.
Extreme dust should be avoided.
Operation under direct sunlight
or near a strong light source should be
avoided.

Note:

Specifications are subject to change without notice.

Safety approvals

Safety standards:

120V model UL 1950, CSA C22.2 950

220-240V model EN 60950 (VDE)
EN 60950 Nordic Deviation (NEMKO)

EMC:

120V model FCC part 15 subpart B class B
CSA C108.8 class B

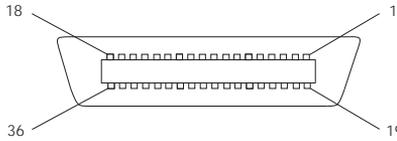
220-240V model EN55022 (CISPR Pub 22) class B
EN 61000-3-2
EN 61000-3-3
EN 50082-1,
IEC 801-2
IEC 802-3
IEC 802-4

Source document

Reflective type:	Opaque documents with smooth surfaces
Transparency type:	Reversal film, Negative film (Optional transparency unit is required.)

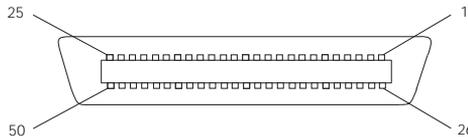
Parallel interface

Interface type:	Bidirectional parallel interface
Data format:	8-bit parallel
Synchronization:	By external strobe pulse
Handshaking:	By ACKNLG and BUSY signals
Logic level:	Input/output data and interface control signals are TTL compatible
Connector type:	36-pin Centronics [®] type connector
Connector pin arrangement:	



SCSI interface

Interface type:	ANSI X3T9.2/375R Revision 10L (SCSI)
Functions:	BUS FREE phase ARBITRATION phase SELECTION/RESELECTION phase COMMAND phase (Logical Unit number is fixed to 0 and 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)
ID Setting:	Selectable from 0 to 7
Terminator:	Internal terminator selectable (enable/disable)
Connector type:	Two 50-pin connectors
Connector pin arrangement:	



Initialization Methods

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

Hardware initialization	<ul style="list-style-type: none">* The scanner is turned on.* The scanner receives an $\overline{\text{INIT}}$ signal from the parallel interface: pin 31 goes LOW.* The scanner receives a SCSI Reset signal from the SCSI interface.
Software initialization	<ul style="list-style-type: none">* Software sends the ESC @ (initialize the scanner) command.* The scanner receives a SCSI Bus Device Message.

Appendix B

Contacting Customer Support

For United Kingdom and the Republic of Ireland Users B-2

For Australian Users B-4

For Singapore Users B-5

For Hong Kong Users B-5

For Philippines Users B-6



If your scanner is not operating properly and you cannot solve your problem with the troubleshooting information in this guide and online help, contact customer support services for assistance.

We will be able to help you much more quickly if you are able to give the exact information indicated below.

Serial number of your scanner:

(The serial number label is on the back of the scanner.)

Brand and model of your computer:

Scanner software version:

(Click the About button on the Help menu in your application for the version number.)

Version of Windows (95, 3.1, NT 4.0, and so on):

Version of software applications you normally use with your scanner:

For United Kingdom and the Republic of Ireland Users

If you purchased your scanner in the UK or the Republic of Ireland, Epson (UK) Limited provides a range of customer services and technical support.

Note:

For customers in the Republic of Ireland, please use the correct dialing codes when dialing the UK telephone numbers listed in the following sections. For example the Enquiry Desk fax number, 01442 227271, should be dialed as 0044 1442 227271 from the Republic of Ireland.

Enquiry Desk

The enquiry desk team can be contacted by calling 0800 220546 in the UK or 1 800 409132 from the Republic of Ireland, by faxing 01442 227271, and via the Internet at info@epson.co.uk. They can provide the following information:

- Information and literature on new EPSON products (also available from Faxon Epson)
- Where to purchase genuine EPSON consumables, accessories and options

Customer Support

Our Customer Support team can provide the following services:

- Technical information on installing, configuring, and operating your EPSON products
- Arranging for faulty EPSON products to be repaired within the warranty period

For information on contacting our Customer Support team, please see the Service and Support Information booklet that came with your EPSON product.

If this booklet is not available, details can be found on Faxon Epson faxback service, EPtec Bulletin Board Service or on EPSON's World Wide Web site. See below for details.

Faxon Epson

Contact Faxon Epson faxback service for:

- Literature and specifications on the latest EPSON products
- Support information including troubleshooting tips, switch settings and driver information

To use Faxon Epson, call 01442 227332 using a touch-tone phone. You will be asked to follow a simple routine to register your document request, and once you have entered your telephone and fax numbers, Faxon Epson will fax a copy of the document catalogue to your fax machine.

When you have found the documents that you need in the catalogue, call Faxon Epson again and enter the document ID numbers. The documents will be faxed to you automatically.

EPtec - Bulletin Board Service

Call the Epson Bulletin Board Service on 01442 227479 for the latest drivers and utilities. No membership is required. Make sure that your communications software is set to 8 data bits, 1 stop bit, no parity bit, ANSI terminal mode emulation and a modem speed of up to 28.8 Kbps. Downloading protocols supported include Xmodem, Ymodem and Zmodem. See the documentation that came with your communications software and modem for more information.

When you first connect to the Bulletin Board Service, you will be asked for your name, company name, phone number and a password (which you can invent yourself).

World Wide Web

If you can connect to the Internet and have a Web Browser, you can access EPSON's World Wide Web site at <http://www.epson.com>. Here you will find information on the latest EPSON products, software drivers, and answers to frequently asked questions.

For Australian Users

EPSON Australia wishes to provide you with a high level of Customer Service. As well as this *User's Guide*, we provide the following sources for obtaining information:

EPSON FAXBACK

EPSON FAXBACK will fax you the latest specifications and pricing for most EPSON products offered in Australia. There is also technical information including details of the latest software and drivers available. Phone (02) 9903 9075 and the system will guide you through a number of choices before faxing the information to your fax machine.

EPSON Bulletin Board System

This is where you can download the latest software and drivers. Visit the BBS to check out the latest versions. If you have a modem, phone (02) 9417 5090.

Internet URL <http://www.epson.com.au>

Access the EPSON Australia World Wide Web pages. Worth taking your modem here for the occasional surf! You can get the same information as offered on the EPSON FAXBACK and the EPSON Bulletin Board plus more.

Your Dealer

Don't forget that your dealer can often help identify and resolve problems. The dealer should always be the first call for advice on problems. They can often solve problems quickly and easily as well as give you advice on the next step to take.

EPSON Helpdesk

EPSON Helpdesk is provided as a final backup to make sure our clients have access to advice. Operators on the Helpdesk can aid you in diagnosing hardware and software problems. They can also advise you on the latest EPSON products and where the nearest dealer or service agent is located. Many types of queries are answered here.

The Helpdesk numbers are:

Phone: (02) 9903 9040
Fax: (02) 9903 9189

We encourage you to have all the relevant information on hand when you ring. The more information you prepare, the faster we can help solve the problem. This information includes the User's Guide for your EPSON product, type of computer, operating system, application programs, and any other information you feel is required.

For Singapore Users

Contact the telephone and fax numbers below:

Phone: (065) 337-7911
Fax: (065) 334-1185

For Hong Kong Users

To obtain technical support as well as other after-sales services, users are welcome to contact EPSON Hong Kong Limited.

Internet home page

EPSON Hong Kong has established a local home page in both Chinese and English on the Internet to provide users with the following information:

- Product information
- Answers to Frequently Asked Questions (FAQs)
- Latest versions of EPSON scanner drivers

Users can access our World Wide Web home page at:
<http://www.epson.com.hk>.

Electronic bulletin board system

An electronic bulletin board system (BBS) is also available to obtain scanner information and the latest versions of scanner drivers. You can log on to the following number for the BBS service:

BBS: (852) 2827-4244

Technical Support Hotline

You can also contact our technical staff at the following telephone and fax numbers:

Phone: (852) 2585-4399

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