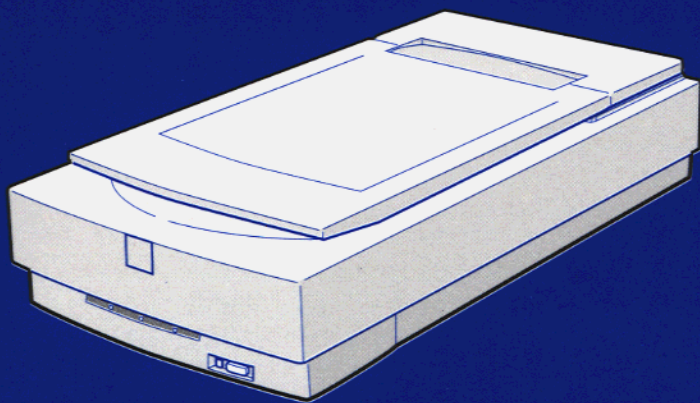


# EPSON



COLOR IMAGE SCANNER

# GT-9600

## User's Guide

# Where to Find Information

## *This User's Guide*

This guide leads you through the scanner setup and options installation, tells you how to use the scanner, and how to make basic scans. It also offers troubleshooting tips and customer support information.

## *EPSON TWAIN Pro User's Guide*

This guide leads you through the EPSON scanner software installation and tells you how to make basic software settings. It also offers troubleshooting tips and calibrating information.

## *Information on EPSON Scanner Software for Windows*

Online help provides you with detailed information on EPSON TWAIN Pro. Access online help by clicking the ? button in the EPSON TWAIN Pro dialog box.

## *HTML Color Guide (may not be available in some countries)*

Explains the basics of color imaging and shows you how to get impressive results from your scanner and other EPSON products. See Chapter 4 of this guide for information on accessing the Color Guide.

# EPSON® GT-9600

## Color Image Scanner

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## User's Guide

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# Declaration of Conformity

Manufacturer: SEIKO EPSON CORPORATION  
Address: 3-5, Owa 3-chome, Suwa-shi,  
Nagano-ken 392-8502 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  
Model: G710U

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

October, 1998

H. Horiuchi  
President of EPSON EUROPE B.V.

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# *Introduction*

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## *Features*

- ❑ Maximum optical resolution of 800 dots per inch (dpi) for main scanning, and 3200 dpi with micro-step for sub-scanning (12-bit input, 12-bit output)
- ❑ A4/Letter size scanning area
- ❑ Full color or grayscale scanning. Capture your images with up to 68.7 billion colors or up to 4,096 shades of gray.
- ❑ EPSON TWAIN Pro lets you take full advantage of your scanner's advanced features.
- ❑ Auto Area Segmentation (AAS) allows you to separate text from photographs on a page so that grayscale images are clearer and text recognition is more accurate.
- ❑ Text Enhancement Technology (TET) enhances text recognition accuracy for optical character recognition (OCR) scanning.
- ❑ EPSON TWAIN Pro's "De-screening" option automatically removes unwanted moiré patterns from scanned images for higher quality output.
- ❑ Optional Transparency Unit for scanning negative film and slide film
- ❑ Optional Automatic Document Feeder for continuous sheet scanning

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## Options

The following optional items are available to expand the versatility of your scanner. For detailed information on the use of these options, see Chapter 3 of this guide.

### **Auto Document Feeder (B81316\*)**

Designed primarily for optical character recognition (OCR) scanning, the Automatic Document Feeder allows you to scan up to 30 pages automatically, and then use them in word processing programs, as if you had typed the text yourself.

### **Transparency Unit (B81315\*)**

Allows you to scan transparent materials, primarily 35 mm slides and film strips. The reading area allows you to scan film up to 8.5 @ 11.7 inches (216 @ 297 mm) in size.

#### **Note:**

*The asterisk is a substitute for the last digit of the product number, which varies by country.*

---

## 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.

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## Important Safety Instructions

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

- ❑ Unplug the scanner before cleaning. Clean with a damp cloth only. Do not spill liquid on the scanner.
- ❑ Do not place the scanner on an unstable surface, or near a radiator or heat source.
- ❑ Do not block or cover the openings in the scanner's cabinet. Do not insert objects through the slots.
- ❑ Use only the type of power source indicated on the scanner's label.
- ❑ Connect all equipment to properly grounded power outlets. Avoid using outlets on the same circuit as photocopiers or air control systems that regularly switch on and off.
- ❑ Do not let the power cord become damaged or frayed.
- ❑ If you use an extension cord with the scanner, make sure the total ampere rating of the devices plugged into the extension cord does not exceed the cord's ampere rating. Also, make sure the total ampere rating of all devices plugged into the wall outlet does not exceed the wall outlet's ampere rating.
- ❑ 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. (Do not adjust controls that are not covered by the operating instructions.)

- ❑ 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.

***Note for German-speaking users:***

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

---

## ***ENERGY STAR Compliance***



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

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

---

## For United Kingdom Users

### Safety information



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

**Important:** *The wires in the main leads 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 main leads 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.



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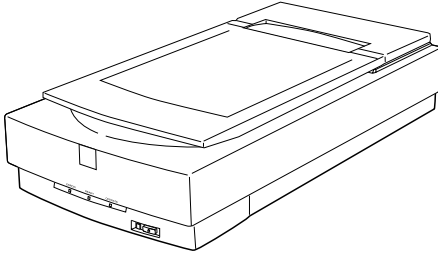
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## ***Unpacking the Scanner***

Your scanner comes shipped with CD-ROMs (and/or floppy disks) that contain the driver software to run your scanner, along with other additional items.



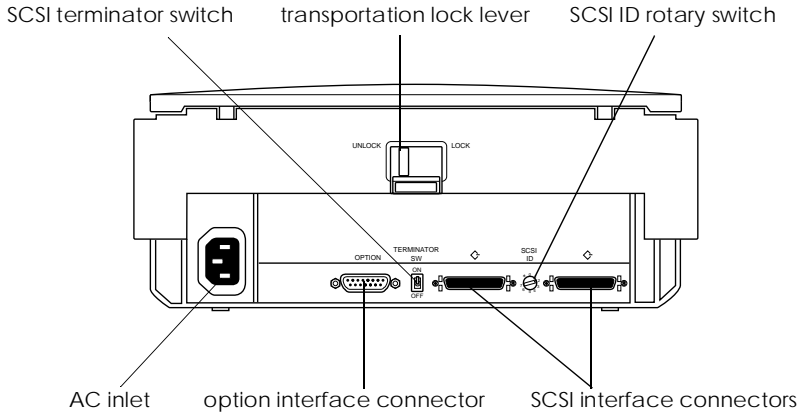
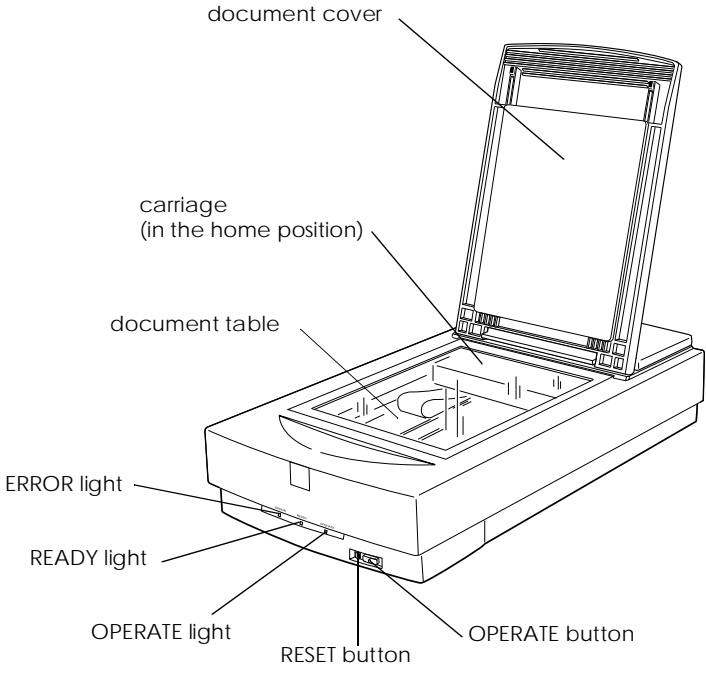
Scanner



Power cord

Depending on the country of purchase, the power cord may come attached to the scanner. The shape of the AC plug also varies, so make sure the plug included is the correct shape for the electrical outlet in your country.





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## *Choosing a Place for the Scanner*

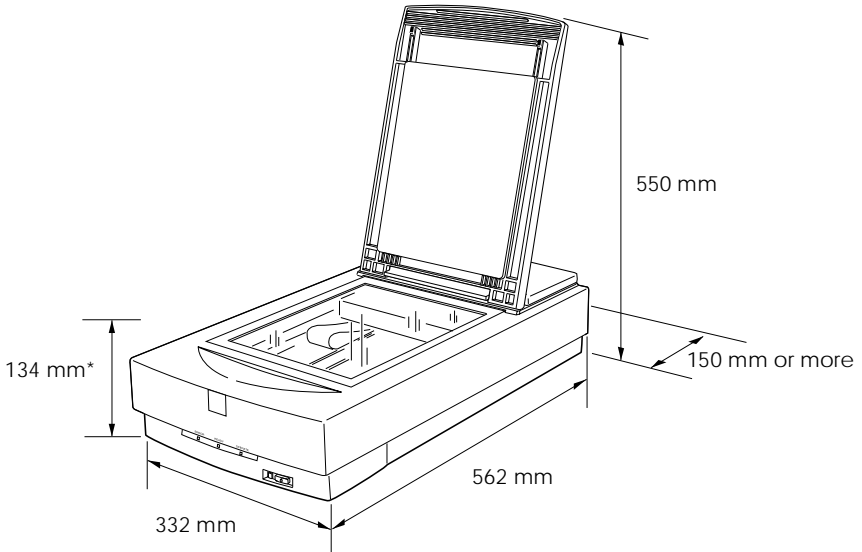
Follow the guidelines below when selecting a location for your scanner:

- ❑ Place the scanner on a flat, stable surface. The scanner will not operate properly if it is on an angle.
- ❑ Place the scanner close enough to the computer for the interface cable to reach it easily.
- ❑ Place the scanner near a wall outlet where the power cord can be easily unplugged.

***Note for French-speaking users:***

*Placez le scanner près d'une prise de courant où la fiche peut-être débranchée facilement.*

- ❑ Allow space behind the scanner for the cables, and space above the scanner so that you can fully raise the document cover.



\* When document cover is closed.

- Keep the scanner away from high temperatures, humidity and excessive dirt or dust. 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.

---

## *Installing a SCSI Interface Board (Windows Only)*

Unless your PC already has a SCSI board installed, you need to install one along with SCSI driver software before installing the scanner driver and software applications.

If you have a Macintosh, or if you already have a SCSI board installed in your PC, go to the next section.

**Note:**

*For additional information, see the installation guide that comes with your SCSI board.*

1. Turn off the computer and any peripheral devices. Unplug any power cords, then disconnect all cables from the back panel of your computer.
2. Remove the cover from your computer.



**Caution:**

*Static electricity can damage electronic components.*

*Discharge static electricity by touching the metal frame of your computer before handling the interface board or any of the computer's circuit boards.*

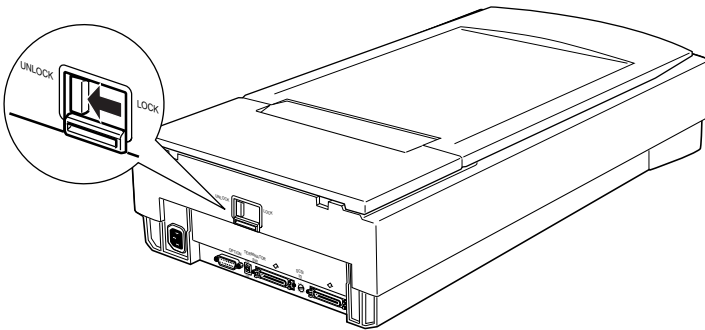
3. Insert the interface board into an appropriate expansion slot, then secure it with the retaining screw.
4. Replace the computer cover and reconnect all cables.

---

## Releasing the Transportation Lock

You must release the transportation lock before connecting the scanner to a power source.

1. Place the scanner on a flat, stable surface with its rear panel facing you.
2. Slide the transportation lock lever on the back of the scanner to the UNLOCK position.



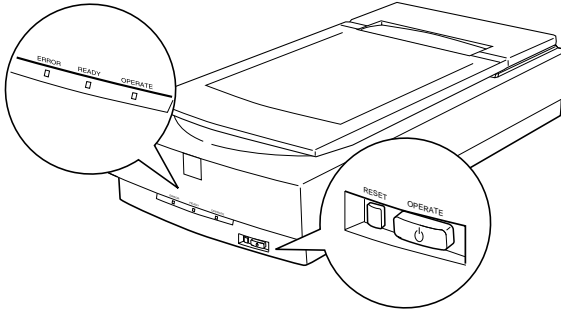
**Note:**

*Simply sliding the transportation lock to the LOCK position does not fully lock the carriage. Before moving or transporting the scanner, be sure to perform the procedure under "Transporting the Scanner and the Transparency Unit" on page 4-4.*

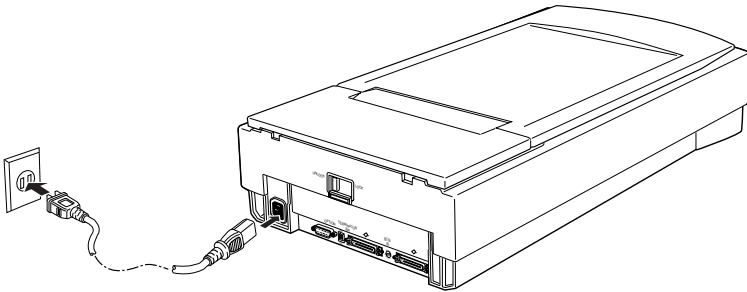
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## Plugging in the Scanner

1. Make sure the scanner is turned off. The scanner is off when the  OPERATE button is raised (not depressed).



2. If the power cord is not attached to the scanner, connect it to the AC inlet on the back of the scanner, and plug the other end into a properly grounded electrical outlet.




### **Caution:**

*It is not possible to change the scanner's voltage. If the label on the back of the scanner does not show the correct voltage for your country, contact your dealer. Do not plug in the power cord.*

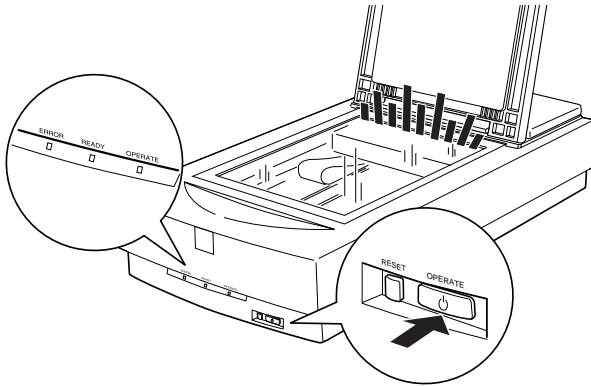
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## Initialization

By observing how the scanner acts during initialization, you can make sure it 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.

At this time, the carriage moves towards the front of the scanner slightly. Next, the fluorescent lamp on the carriage flashes for about 10 seconds while the carriage moves forward and back. Finally the carriage returns to its original position, and then the READY indicator lamp lights.



---

## *Connecting the Scanner to Your Computer*

### *For PC users:*

Unless your PC already has a SCSI board installed, you need to install one, along with SCSI driver software. Install the SCSI board according to the directions included with the board. Also see "Installing a SCSI Interface Board (Windows Only)" on page 1-6.

If your PC has a SCSI board up and running, connect the scanner as described in the next section.

### **Note:**

*You will need to install the SCSI driver that is normally included with Windows 95, 98, or NT (see your system documentation for instructions), or the driver described in the SCSI board installation documentation.*

### *For Macintosh users:*

Conventional Macintosh computers have built-in SCSI ports; therefore you do not need to install a SCSI board on a Macintosh. Follow the directions below to connect your scanner and computer.

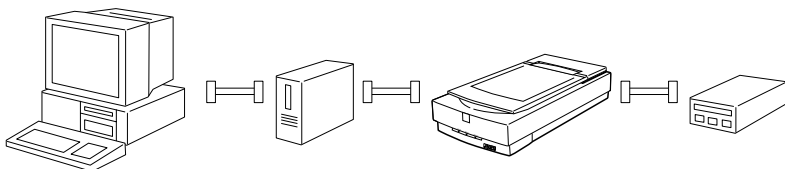


## Understanding SCSI connections

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

### **Daisy 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, 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 another SCSI device.



### **SCSI cables**

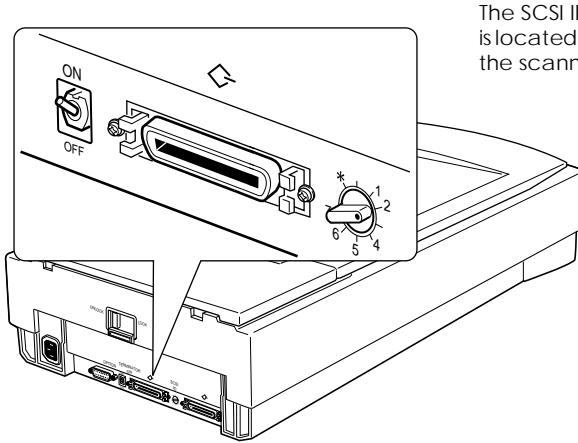
You may need to purchase SCSI cables before setting up your SCSI daisy chain. Be sure the SCSI cable connectors are suitable for your hardware, depending on the maker of your SCSI device and SCSI interface board.

### **SCSI ID and terminator**

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 or removed.

## Setting the SCSI ID number

The scanner's default SCSI ID number is 2.



The SCSI ID rotary switch is located on the back of the scanner.

If you add the scanner to a system in which one of your SCSI devices already has a SCSI ID of 2, change the scanner ID number to an unused number using the rotary switch. See the table below as a guide.

ID	Availability	Description
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
3		Not available if your Macintosh has a built-in CD-ROM
4		
5		
6		
7	Not available for Macintosh	Always used for the Macintosh itself
	May not be available for Windows	Usually used for the SCSI board
*	Not available	Never selected* Use only to prepare the scanner for transportation. See "Transporting the Scanner and the Transparency Unit" on page 4-4.

\* Scanner will not work if selected.



**Caution:**

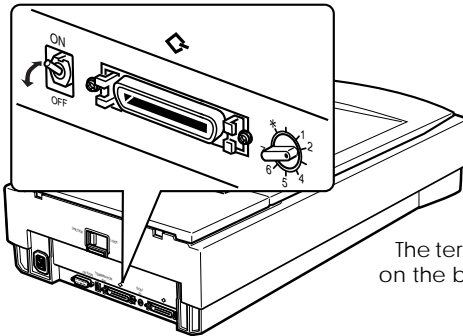
*Do not set the SCSI ID to an ID number that is already assigned to another device otherwise the computer, scanner, and other devices will not operate properly.*

## Setting the terminator switch

The scanner has a built-in terminator, which allows SCSI devices to communicate properly with each other. You may need to change the terminator switch setting according to your computer system.

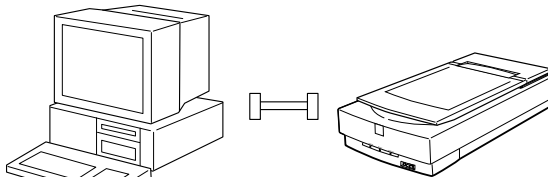
**Note:**

*Do not use an external terminator.*



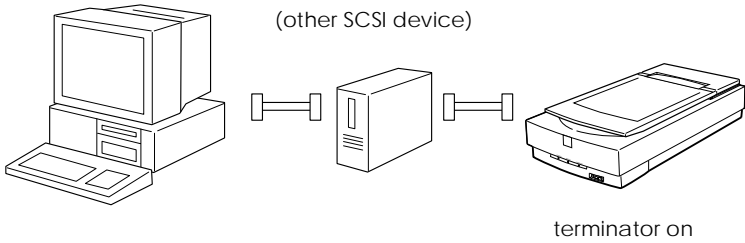
The terminator switch is located on the back of the scanner.

Only the scanner is connected

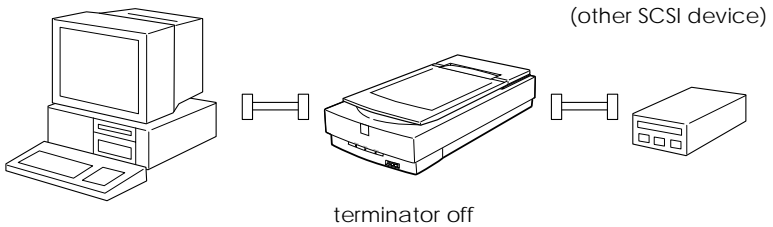


terminator on

The scanner is the last device in the daisy chain



The scanner is in the middle of the daisy chain



## Connecting the scanner

Connect the scanner to your computer or to another SCSI device as follows:

### **Note:**

*The combination of 50-pin and 25-pin connectors you need varies depending on the maker of your SCSI device and SCSI interface board.*

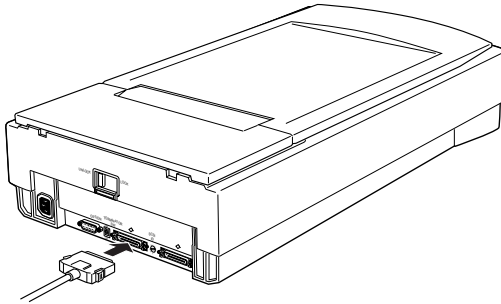
1. Make sure the scanner, computer, and all other SCSI devices are turned off and unplugged from the power source.



### **Caution:**

*Do not connect the scanner to the computer or other devices while they are turned on as damage may occur.*

2. Insert one end of the interface cable into one of the scanner SCSI connectors and press until the locks on both sides snap in.



**Note:**

- ❑ *To connect the scanner to a SCSI device other than the computer, the length of cable in the daisy chain must not exceed 6 meters; otherwise the system may not work properly.*
- ❑ *To connect the scanner to a PC using SCSI-2, the length of the cable must not exceed 3 meters.*

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

**Note:**

*The SCSI port on the Macintosh is the larger port with the SCSI icon over it.*

4. Plug in the power cords of your computer, scanner, and other external SCSI devices.

**Note:**

*Before turning on your system, be sure to read “Power-on sequence” following.*

## Power-on sequence

Keep the following in mind every time you turn on your computer and SCSI devices, including the scanner.

- ❑ Be sure to turn on the SCSI device which is connected at the farthest end of the daisy chain first, then the second farthest and so on, until finally your computer. If you attempt to use a SCSI device which has been turned on after the computer, it may not work properly, or the computer may not work properly.
- ❑ **For Windows 95 or 98 users:**  
The first time you turn on the computer after turning on the scanner, one of the following dialog boxes may appear.



Windows 95



Windows 98

If you see one of these, follow the installation instructions in Chapter 1 of your scanner software manual, then see “Power-off sequence”, below.

## *Power-off sequence*

Keep the following in mind every time you turn off your computer and SCSI devices.

- ❑ When you are finished using your system, turn off your computer first, then the scanner and other SCSI devices in reverse order of the power-on sequence.
- ❑ While using your computer, do not turn off any SCSI device which has a terminator that is active (on).
- ❑ Do not turn the scanner off and back on while using your computer, otherwise the scanner may not work properly.

When the connection is complete, you need to install the scanner software. See Chapter 1 of your scanner software manual.



## Chapter 2

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# Using Your Scanner

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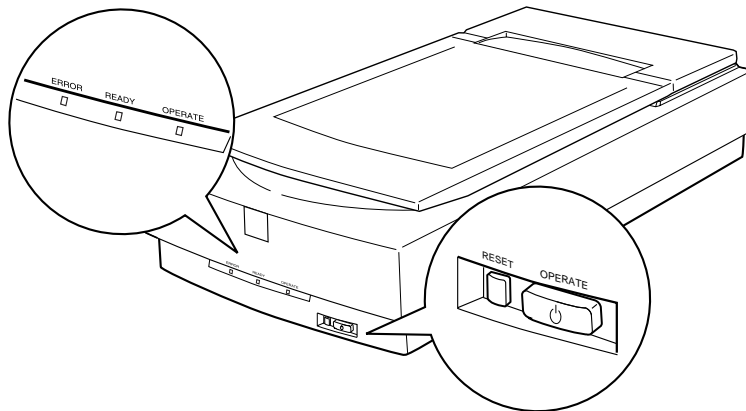
This chapter shows you how the scanner operates. The basic procedure for scanning is as follows:

1. Turn on the scanner. (Keep in mind the "Power-on sequence" on page 1-17.)
2. Place the document you want to scan on the document table. (This is described in detail on page 2-4.)
3. Run the scanner software and scan. (See your scanner software manual for details on scanning.)

---

## *Lights and Buttons*

The scanner has three indicator lights and two buttons.





## Lights

Lights	Color	Indicator Status	Meaning
OPERATE	Green	Lit	Scanner is turned on.
READY	Green	Lit	Scanner is ready to scan.
		Flashing	Scanning operation is in progress. Error. See "Error indicator" on page 4-5 for more information about errors.
ERROR	Red	Lit	This indicator also lights when an error occurs. Error. See "Error indicator" on page 4-5 for more information about errors.
		Flashing	

2

## Buttons

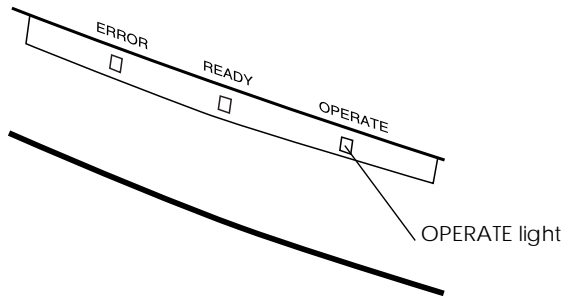
Button	Function
 OPERATE	Turns the scanner on and off.
 RESET	Resets the scanner after an error. Pressing this button while scanning is in progress stops the scanner and may cause an error in the scanning software.

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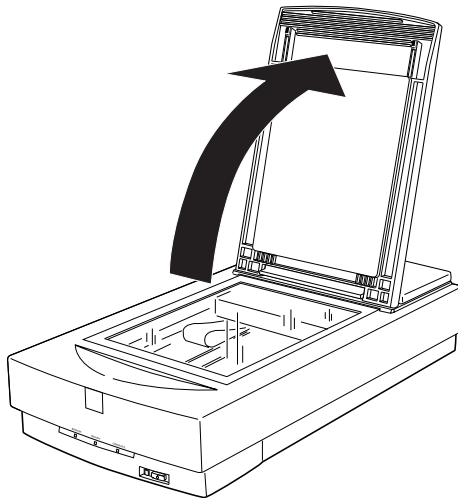
## Placing a Document on the Scanner

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.

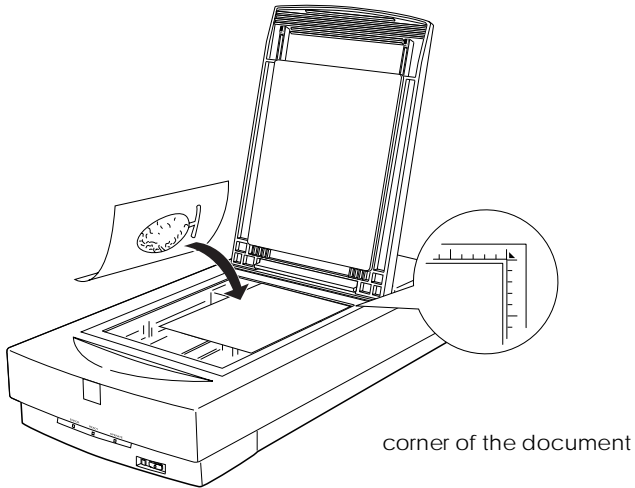
1. Turn on the scanner by pressing the  OPERATE button. The OPERATE light comes on.



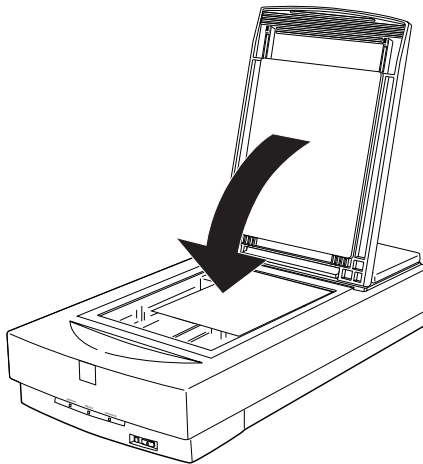
2. Turn on the computer and make sure that the scanner's READY light is on. Open the document cover.



3. Place the document on the document table, with the side to be scanned facing down. Make sure that the document is carefully aligned.



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



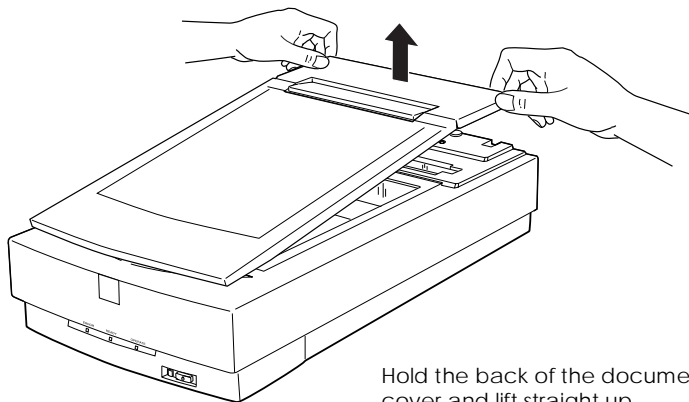
**Note:**

- ❑ *Make sure the document is flat against the glass surface, otherwise the image will appear fuzzy and out of focus. Also be sure to close the document cover to prevent interference from external light.*
  - ❑ *Always keep the document table clean. See “Cleaning the Scanner” in Chapter 4.*
  - ❑ *Do not leave photographs on the document table for an extended period of time as they may stick to the glass.*
  - ❑ *Do not place heavy objects on top of the scanner.*
5. Start your scanner software, and follow scanning instructions in your scanner software manual.

---

## Removing the Cover for Thick or Large Documents

Carefully lift straight up on the back of the document cover.

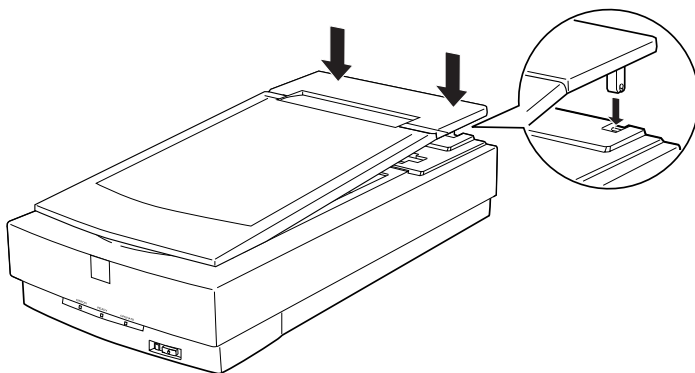


Hold the back of the document cover and lift straight up.

**Note:**

*When scanning with the cover removed, do not leave any area of the document table exposed to prevent interference from external light.*

When you are finished scanning, reattach the document cover by pushing straight down on the back until it clicks into place.



**Caution:**

*Make sure both of the notches in the cover's hinges are directly above the clips on the scanner before pushing the cover down into place. Improperly aligned notches can damage the cover.*



---

## *Sizing Up Your System*

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, seek advice from your dealer or an experienced scanner user.

### *RAM and hard disk size*

Scanned images 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 affects the quality of the image you see. Consider a high resolution monitor if you do precise color work, but also be sure you have a high quality video card.

## ***File compression software***

Many different programs are available to make image files smaller for storage or transmission. For example, some compression software can store a 3MB image file on a 1.44MB floppy disk, and 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.

## Chapter 3

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### **Options**

Using the Transparency Unit . . . . .	3-2
Unpacking the Transparency Unit . . . . .	3-2
Removing the shipping screw . . . . .	3-3
Installing the Transparency Unit . . . . .	3-4
Transparency guide and reflective document mat . . . . .	3-6
Positioning transparencies for scanning . . . . .	3-7
Scanning normal (reflective) documents . . . . .	3-10
Using the Automatic Document Feeder . . . . .	3-12
Unpacking the Automatic Document Feeder . . . . .	3-12
Installing the Automatic Document Feeder . . . . .	3-13
Loading paper into your Automatic Document Feeder . . . . .	3-15
Loading documents manually . . . . .	3-17
Document specifications . . . . .	3-17

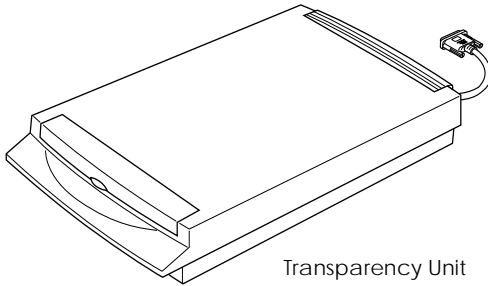
---

## Using the Transparency Unit

The optional Transparency Unit (B81315\*) makes it possible to scan transparencies and slides, in full color. Once you install the Transparency Unit, you can leave it in place even when you want to return to scanning normal (paper) documents.

### Unpacking the Transparency Unit

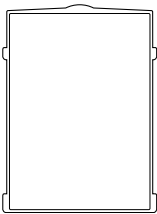
Make sure that all the items shown below are included and have not been damaged during shipping. Contact your EPSON dealer if any item is missing or damaged.



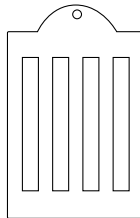
Transparency Unit



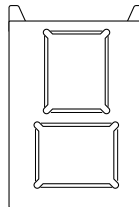
installation screws (2)



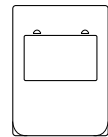
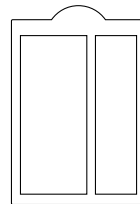
reflective document mat



film holder



transparency guides



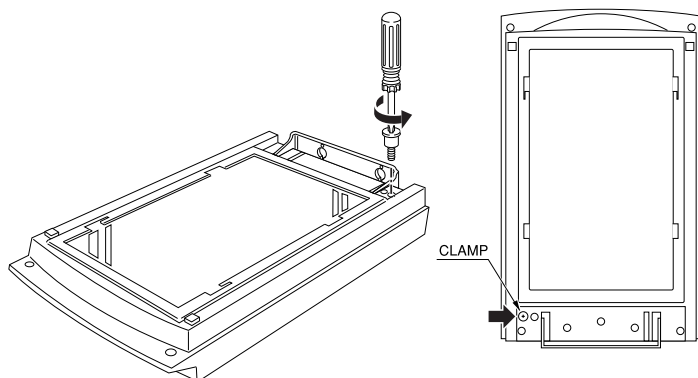
**Note:**

*Do not store the small transparency guide in the pocket.*

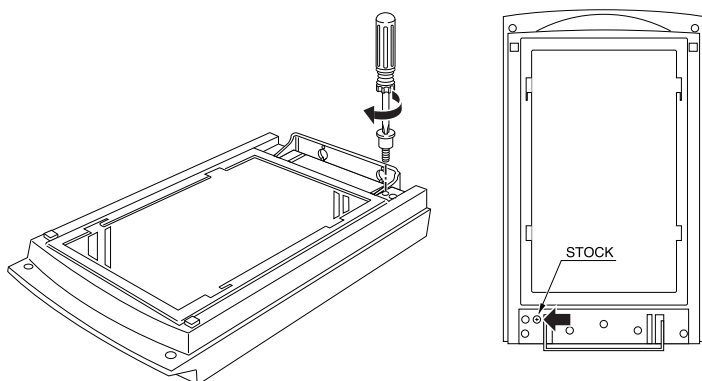
## Removing the shipping screw

A shipping screw is installed on the Transparency Unit to prevent damage during shipping. Be sure to use the following procedure to remove this screw before attempting to use the unit.

1. Turn over the Transparency Unit so its glass side is facing up.
2. Remove the shipping screw as shown below.



3. Screw the shipping screw into the storage hole as shown.



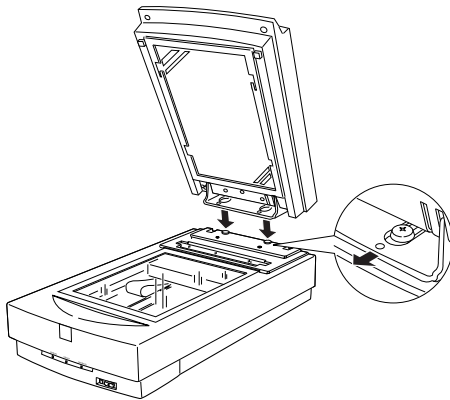
**Note:**

*Before transporting the scanner, remove the Transparency Unit and return the shipping screw to its original shipping hole. See "Transporting the Scanner and the Transparency Unit" on page 4-4 for details.*

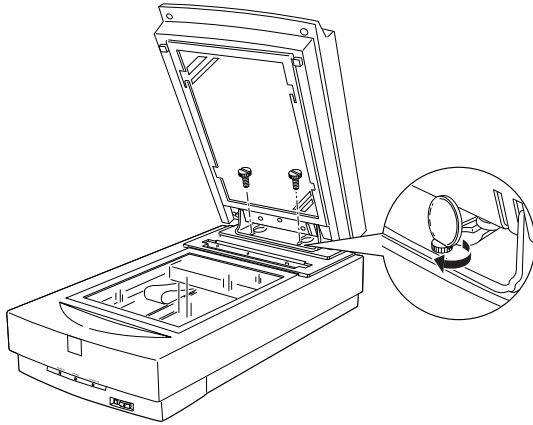
## ***Installing the Transparency Unit***

Follow the steps below to install the Transparency Unit on the scanner.

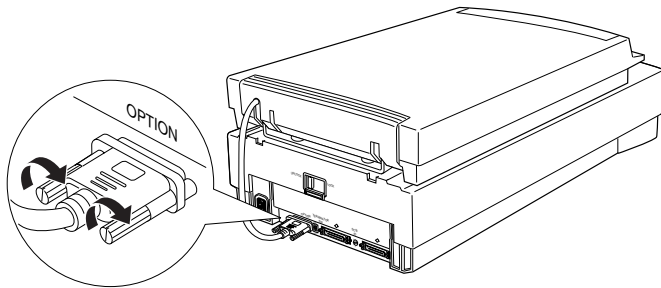
1. Make sure the scanner is turned off, and unplug the power cord.
2. Remove the document cover from the scanner by lifting straight up on its back edge. (See page 2-7)
3. Slide the mounting slots on the Transparency Unit under the two installation screws attached to the scanner.



4. Insert the two installation screws provided with the Transparency Unit into the holes as shown below, and then tighten the screws with a coin.

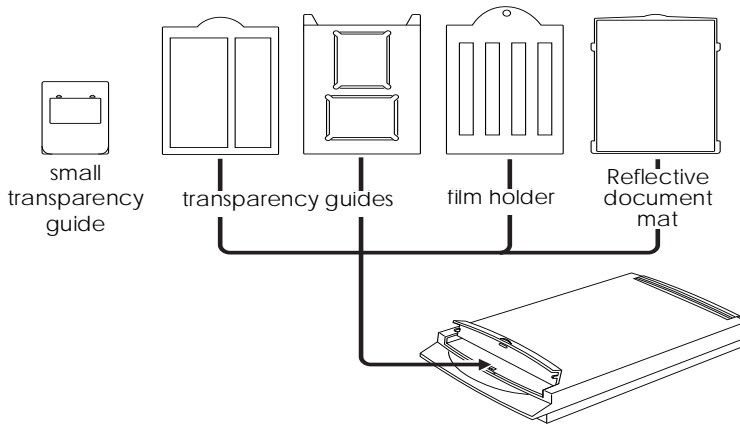


5. Close the Transparency Unit.
6. Connect the Transparency Unit's connector to the option connector on the scanner.



## Transparency guide and reflective document mat

Three transparency guides and a film holder for scanning transparencies and a reflective document mat for scanning normal paper documents are included with this unit. To use them, see the instructions below.



### **Caution:**

*Do not put the small transparency guide into the Transparency Unit pocket.*



## Positioning transparencies for scanning

### **Note:**

- ❑ *Be sure to wipe the Transparency Unit glass, the scanner's document table, and the narrow window near the mounting bracket with a soft cloth before scanning transparencies.*
- ❑ *Operation of the Transparency Unit is controlled automatically by your scanner software.*

1. Open the Transparency Unit.
2. Place the transparency guide onto the scanner's document table.

See the following pages for details on each of the following types of transparencies.

35mm film strips ... page 3-8

Mounted slides ... page 3-8

120/220 film ... page 3-9

4 x 5 inch film ... page 3-9

Non-standard film sizes ... page 3-10

3. Place the transparency on the scanner's glass document table, aligning it with the upper right-hand corner of the transparency guide. Make sure the glossy side of the transparency is facing down.
4. Close the Transparency Unit. If the reflective document mat is installed on the Transparency Unit, remove it.

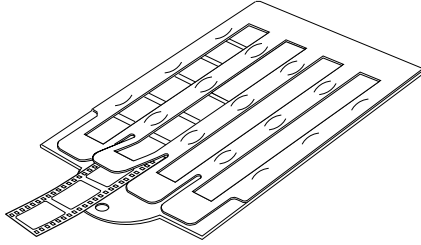
### **Note:**

*Make sure the Transparency Unit is completely closed. Otherwise an option error will occur and scanning will be impossible.*

Use your scanner software to scan the transparency.

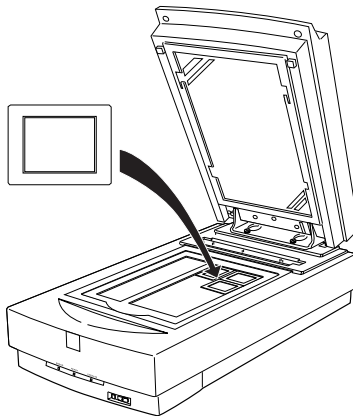
### ***35mm film strips***

Slide the film strips into the film holder, making sure the glossy (smooth) side of the film is facing up. When placing the transparency guide with film strips onto the scanner's glass document table, the glossy side of the film should be facing down.



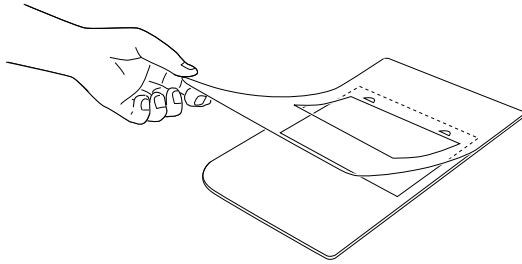
### ***Mounted slides***

Place the slides inside the slide transparency guide, making sure the glossy (smooth) side of the film is facing down.



### *120/220 film*

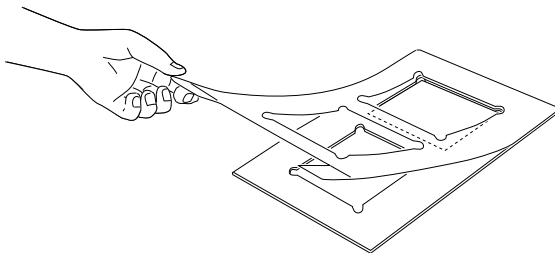
Place the film into the slide transparency guide, making sure the glossy (smooth) side of the film is facing down. Make sure that the area you want to scan is aligned properly with the opening in the transparency guide.



3

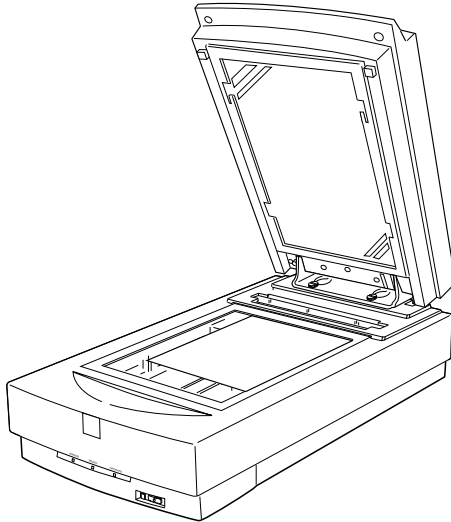
### *4 x 5 inch film*

Place the film into the slide transparency guide, making sure the glossy (smooth) side of the film is facing down. The area you want to scan should be aligned properly with the opening in the transparency guide.



### ***Non-standard film sizes***

Place the film directly onto the scanner's glass document table, making sure the glossy (smooth) side of the film is facing down.



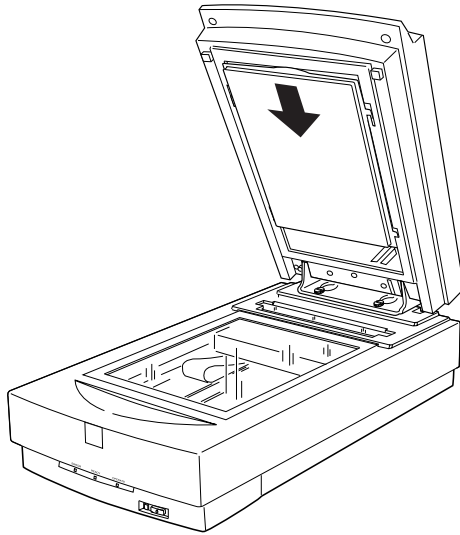
### ***Scanning normal (reflective) documents***

When you return to scanning normal reflective documents, you should always insert the reflective document mat included with this unit. Also, make sure you remove the transparency guide from the scanner's document table.

Insert the reflective document mat as described below.

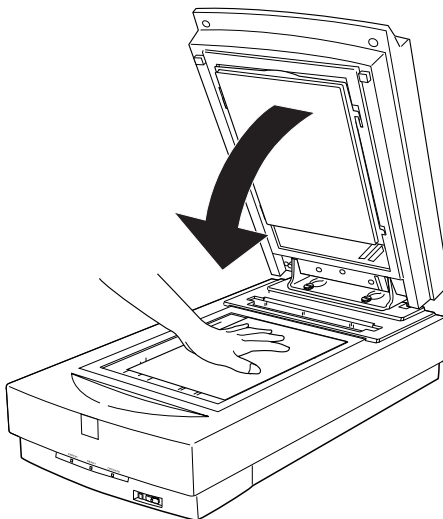
1. Open the Transparency Unit.

2. Insert the tabs on the reflective paper document mat into the slots on the Transparency Unit and slide the mat into place.



3

3. Position the reflective document and close the unit.



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

---

## ***Using the Automatic Document Feeder***

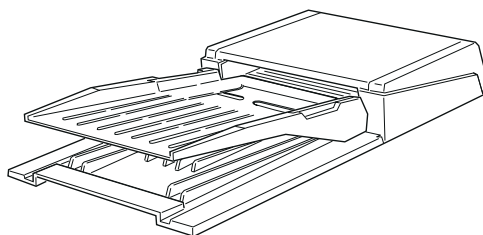
The Automatic Document Feeder (B81316\*) allows you to automatically load multiple-page documents into the GT-9600 scanner. This document feeder is particularly useful for OCR (optical character recognition) scanning, or for creating an image database.

## ***Unpacking the Automatic Document Feeder***

When you unpack your Automatic Document Feeder, make sure you have all the parts shown below and that none is damaged. If you find any missing or damaged items, contact your EPSON dealer immediately.



Installation screws

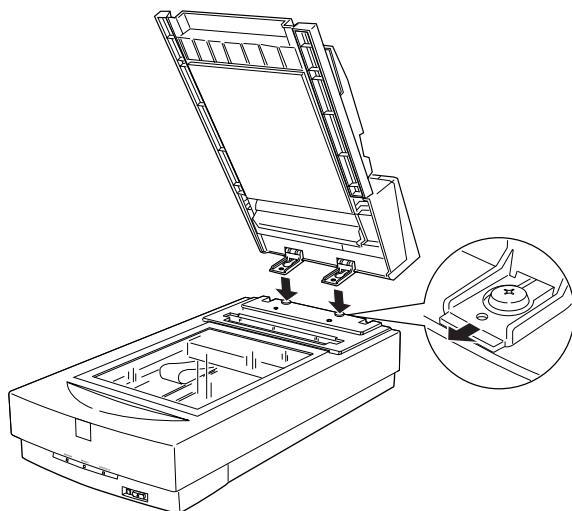


Automatic Document Feeder

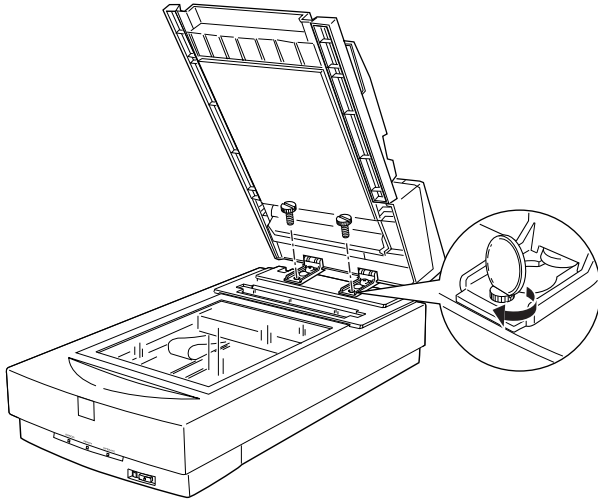
## Installing the Automatic Document Feeder

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

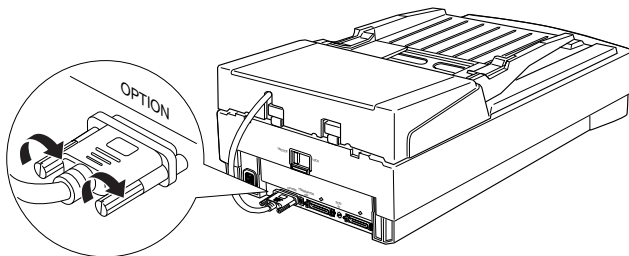
1. Make sure your scanner is turned off, and unplug the scanner's power cord.
2. Remove your scanner's document cover by holding the cover behind the hinge and lifting the back of the cover straight up. (See page 2-7)
3. The scanner comes with two installation screws attached; slide the mounting slots on the Automatic Document Feeder forward, underneath these two screws. Do not remove the protective materials from the Automatic Document Feeder's mounting hardware yet.



4. Insert the installation screws included with your Automatic Document Feeder into the holes in the scanner, then use a coin to tighten them.



5. Remove the protective materials from the Automatic Document Feeder's mounting hardware.
6. Close the Automatic Document Feeder.
7. Attach the Automatic Document Feeder's connector to the scanner's option interface.





## Loading paper into your Automatic Document Feeder

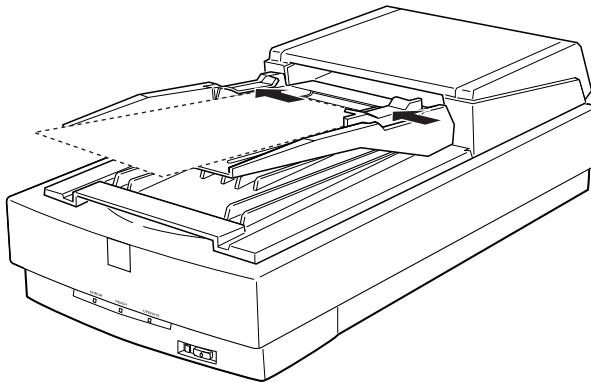
Your Automatic Document Feeder can automatically load up to 30 sheets of the following paper sizes (based on a paper weight of 17 lbs and a stack thickness of 6.0 mm or less):

Checks	76 x 127 mm (3 x 5 inches)
B5	182 x 257 mm (7.17 x 10.1 inches)
A4	210 x 297 mm (8.27 x 11.69 inches)
Letter	215.9 x 279.4 mm (8.5 x 11 inches)
Legal	215.9 x 355.6 mm (8.5 x 14 inches)

3

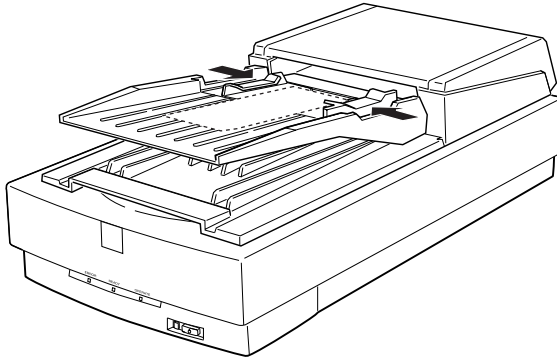
Follow the steps below to load paper into the Automatic Document Feeder.

1. Slide the left edge guide all the way to the left and place your paper in the feeder tray. Then move the right edge guide so it is flush with the right edge of your paper.

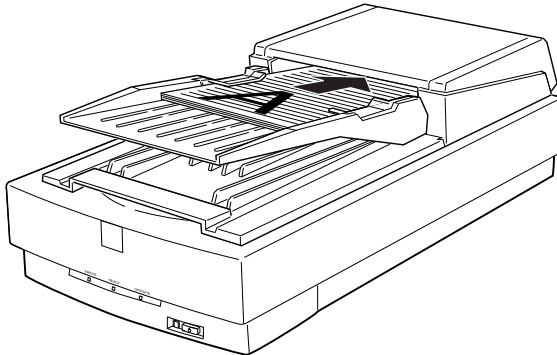


**Note:**

*For checks, move the left edge guide to the center till it stops, then place your checks in the tray and move the right edge flush against them.*



2. Insert the paper stack into the Automatic Document Feeder until it meets resistance. Make sure that the side you want to scan is facing up.



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

## Loading documents manually

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

To load manually, lift the Automatic Document Feeder and place the document on the scanning surface. Then lower the Automatic Document Feeder and scan the document.

### **Note:**

- Opening the Automatic Document Feeder or its cover while it is operating results in an option error and paper feeding stops.*
- Always close the Automatic Document Feeder and its cover before using it.*

## Document specifications

Size:	Width 3 to 8.5 inches (76 to 215.9 mm) Length 5 to 14 inches (127 to 355.6 mm)
Thickness:	0.07 to 0.16 mm
Weight:	52.3 to 127.9 g/m <sup>2</sup>
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 might damage the feeder mechanism.
- ❑ The document has no folds closer than 8 mm from its edge.
- ❑ 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 Feeder and scan documents individually.

## Chapter 4

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# ***Maintenance and Troubleshooting***

Maintenance . . . . .	4-2
Cleaning the scanner . . . . .	4-2
Replacing the fluorescent lamp . . . . .	4-3
Transporting the Scanner and the Transparency Unit. . . . .	4-4
Problems and Solutions . . . . .	4-5
Error indicator. . . . .	4-5
Operating problems . . . . .	4-7
Quality problems . . . . .	4-9
Paper jams . . . . .	4-16
Viewing the Color Guide . . . . .	4-17
Changing the SCSI ID Number or SCSI Board . . . . .	4-18

---

## Maintenance

### Cleaning the scanner

To keep your scanner operating at its best, you should clean it periodically, as described below.

1. Unplug the power cord.
2. Clean the outer case with mild detergent and water.
3. If the document table glass becomes dirty, clean it with a soft dry cloth. If the glass is stained with grease or some other hard-to-remove material, use a small amount of glass cleaner and a soft cloth to remove it. Wipe off all remaining liquid.

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



**Caution:**

- ❑ *Be careful not to scratch or damage the document table glass, and do not 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 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 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. When this happens, the lamp assembly must be replaced. For details, contact your dealer.



***Caution:***

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

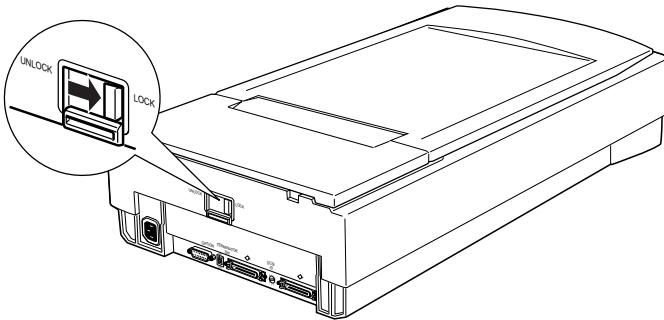
---

## ***Transporting the Scanner and the Transparency Unit***

When transporting the scanner or the Transparency Unit over a long distance, or storing them for an extended period, you need to lock the scanner's carriage and the Transparency Unit's lamp assembly, to prevent damage. Follow the procedures below.

### ***For the scanner***

1. Make sure the transportation lock lever is in the UNLOCK position.
2. Align the SCSI ID rotary switch with "\*".
3. Turn on the scanner.
4. After the carriage moves to the back of the scanner, slide the transportation lock lever to its LOCK position.



### ***For the optional Transparency Unit***

1. With the Transparency Unit attached, turn on the scanner and wait until the unit's lamp assembly moves to its home position. Then turn off the scanner and remove the Transparency Unit.



2. Raise the front of the Transparency Unit, hold it upright, and gently shake it up and down once so that the lamp assembly slides down toward the back of the unit. Wait until the lamp assembly comes to rest.
3. Install the shipping screw in its original shipping hole.

---

## ***Problems and Solutions***

This section divides scanner problems into three categories:

- Error indicator . . . . . page 4-5
- Operating problems . . . . . page 4-7
- Quality problems . . . . . page 4-9

See the table in “Error indicator” 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.

The online Color Guide also provides versatile tips and other information helpful for problem-solving.

### ***Error indicator***

When an error occurs, the scanner stops operating and the ERROR and READY lights indicate the error type as described below.

<b>ERROR Light</b>	<b>READY Light</b>	<b>Error Type</b>
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.

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

### ***Interface error***

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

When this error occurs, check the interface connection and then push the RESET button or turn the scanner off and then back on again to reset it.

### ***Fatal error***

This type of error indicates one of the following problems:

- The fluorescent lamp needs to be replaced.
- The transportation lock lever is not released.
- The scanner is malfunctioning.

Check that the transportation lock lever is released and check any installed options for problems. Next, turn the scanner off and then back on again. If this does not correct the problem, consult your dealer.

### ***Option error***

This indicates a problem with an installed option such as a paper jam, an empty document feeder, or an open cover. Check the option and correct the cause of the problem.

## 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 (see Chapter 1).
- ❑ Inappropriate selection of the scanner functions (see your software manual).
- ❑ Incorrect setup of your computer or software (see Chapter 1 in this guide or the software manual).
- ❑ Incorrect operation of your software (see your software manual).

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

---

### The OPERATE light does not light.

---

Cause	What to do
Scanner is off	Press the ⏻ OPERATE button to turn on the scanner.
Scanner is not connected correctly	Make sure the power cord is connected to the scanner and plugged into a power outlet.

---

### The scanner does not scan.

---

Cause	What to do
The scanner is not ready to scan	Wait until the READY light is green (ready for scanning).

---

Interface or software setting problem	Make sure your interface port and software settings are correct. Also make sure that your computer's interface board is installed properly.
SCSI problem	Make sure the scanner's SCSI ID and terminator are set correctly.
Interrupt conflict	If you have other expansion boards in your computer, make sure that their interrupt settings are not interfering with your SCSI board. See your computer's documentation for details.

---

**The scanner software does not work properly.**

---

Cause	What to do
Software installation problem	Make sure your software is installed correctly.
Computer system requirement problem	Make sure your computer meets the memory and other system requirements specified for the software you are using.

## Quality problems

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### The entire image is distorted or blurred.

---

Cause	What to do
Document placement	Make sure the document is flat against the document table.
Document movement	Make sure you do not accidentally move the document during scanning.
Scanner orientation	Make sure the scanner is on a flat, stable surface.

---

### Part of the image is distorted or blurred.

---

Cause	What to do
Document condition or placement	Make sure the document is uniformly flat against the document table. A document that is wrinkled or warped can cause problems.

---

### Edges of the document are not scanned.

---

Cause	What to do
Document size	If your document is too large, position it so the area you want to scan is within the limit marks on the edge guides of the document table.

---

---

**Colors are patchy or distorted at the edges of the image.**

---

**Cause****What to do**

---

Document condition

A document that is very thick or warped at the edges can cause discoloration. Cover the edges of the document with paper to block outside light.

---

Document placement

Make sure the document is flat against the document table.

---

---

**The image is faint or out of focus.**

---

**Cause****What to do**

---

Document placement

Make sure the document is flat against the document table.

---

Gamma setting

Check your software's Gamma setting.

---

Exposure setting

Check your software's Exposure setting.

---

---

**The image is too dark.**

---

**Cause****What to do**

---

Brightness setting

Check your software's Brightness setting.

Check the brightness and contrast settings of your computer display.

---

---

**Straight lines in the image come out jagged.**

---

<b>Cause</b>	<b>What to do</b>
Document placement	Make sure the document is oriented perfectly straight on the document table. Align vertical and horizontal lines with the scales at the top and side of the document table.

---

---

**The image does not look the same as the original.**

---

<b>Cause</b>	<b>What to do</b>
Image settings	Try different image setting combinations on your scanner software.
Color matching and color management problem	Your software may not have sufficient color matching and color management features, or these components may not be installed correctly. See the documentation that came with your software and computer.
File format problem	If you are importing an image file, make sure the file format is one your software can read. Also, make sure the image settings of your software are appropriate for the type of image you want to scan.

---

---

**A line of dots is always missing from the scanned image.**

---

Cause	What to do
Print head malfunction	Print head malfunction is indicated when a line is missing on printouts only. See your printer manual.
Scanner sensor malfunction	Scanner sensor malfunction is indicated when the line is missing on both screen images and printouts. Contact your dealer.

---

**A line appears in the scanned image when using the Automatic Document Feeder.**

---

Cause	What to do
The narrow window near the mounting bracket is dirty	Wipe and remove any dirt on the window with a soft cloth.

---

**When using halftoning, textured patterns of dots appear inside particular areas of the image.**

---

Cause	What to do
Normal scanning	This condition is normal. The scanner automatically minimizes the problem if on is selected for the De-screening setting in the Image Type dialog box.

---



---

**Colors in the image look odd.**

---

<b>Cause</b>	<b>What to do</b>
Image Type and Destination settings	Make sure the EPSON TWAIN Pro Image Type and Destination settings are correct.
Operation problem when using Transparency Unit	When using the Transparency Unit, make sure the narrow window near the hinges on the document table is covered, or make sure the Transparency Unit is closed when scanning.

---

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

---

<b>Cause</b>	<b>What to do</b>
Software image setting problem	Check the image settings of your scanner software, especially data format (bits, pixel, color), gamma correction, and color correction. Try different combinations of these settings.
Color matching and color management capabilities	Check the color matching and color management capabilities of your computer, display adapter, and software. Some computers can change the color palette to adjust the colors on your screen. See your software and hardware manuals for details.
Normal color matching	Exact color matching is very difficult. Check your software and monitor manuals for information on color matching and calibration.

---

---

**Printed colors are different from those in the original image.**

---

<b>Cause</b>	<b>What to do</b>
Normal color matching	Exact color matching is very difficult. Check your software or contact your printer company for information on color matching and calibration.

---

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

---

<b>Cause</b>	<b>What to do</b>
Software image size settings	The image size settings of your software determine the size of the printed image. Do not use the size of the monitor image to judge the printed size.

---

**Scanned images cannot be printed or come out garbled when printed.**

---

<b>Cause</b>	<b>What to do</b>
Printer connection or setup	Make sure your printer is properly connected to the computer and correctly set up. See your printer manual for details.
Software installation problem	Check that your software is properly installed and set up for your printer. See your software manual.

---

---

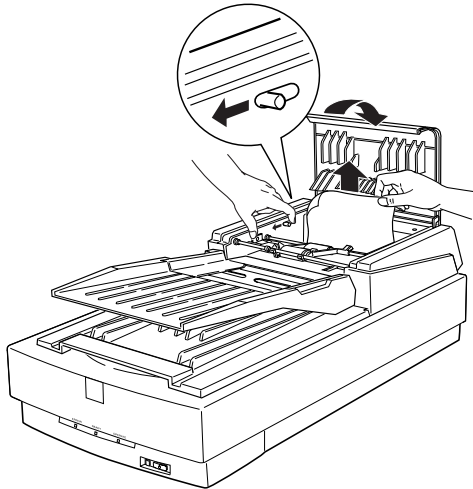
## The colors of negative film preview images look strange.

---

Cause	What to do
Document Source setting	Make sure the EPSON TWAIN Pro Document Source setting is TPU-Neg. Film.
Film holder or transparency guide frame	The dark area around the film, such as the frame of the film holder or transparency guide, is perceived as white, which alters the exposure of the scanning area and causes scans to appear darker. See the correct color by clicking and dragging the mouse over an area, and then clicking the zoom preview button.

## *Paper jams*

If a paper jam occurs, first open the Automatic Document Feeder's cover. Then pull forward on the jam-release lever and 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.)



After removing the jammed paper, close the document feeder cover and reset the scanner.

---

## Viewing the Color Guide

Using an HTML browser on your computer, you are able to view the Color Guide. This provides tips for handling color imaging data, using several color imaging products, and other general information about color imaging.

You need one of the following browsers, or an equivalent, to view the Color Guide:

- Netscape Navigator 3.0 or later
- Microsoft Internet Explorer 3.0 or later

If a browser is not installed on your computer, you need to obtain one and install it, or you can install the browser that comes with your Color Guide CD-ROM. For further details, double-click the Readme.txt (for Windows) or Read Me First icon (for Macintosh), and follow the instructions.

To view the Color Guide, double-click on the following icon:

For Windows:            color.htm

For Macintosh:        Color Guide

Then follow the instructions on the screen.

---

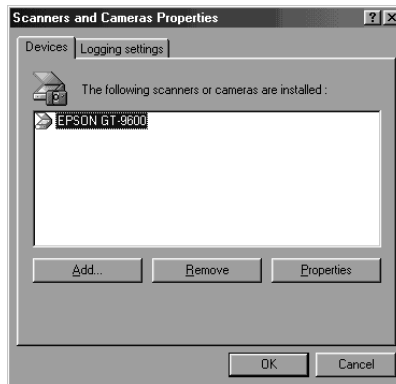
## Changing the SCSI ID Number or SCSI Board

If you are using your scanner with Windows 98 and you want to change the scanner's SCSI ID number or replace the SCSI board with a new one, 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, or replace the SCSI board.
6. Turn on your scanner and then your PC.
7. Follow the instructions on the screen.





*Appendix A*

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***Technical Specifications***

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Electrical ..... A-4

Environmental ..... A-4

Safety Approvals ..... A-5

CE Marking ..... A-5

SCSI Interface ..... A-6

Initialization Methods ..... A-7



---

## Scanning

Scanner type:	Flatbed, color
Photoelectric device:	Color CCD line sensor
Effective pixels:	6800 × 9360 pixels at 800 dpi, 100%
Document size:	216 mm × 297 mm (8.5 inches × 11.7 inches A4 or US letter size (The reading area can be specified from your software.)
Scanning resolution:	800 dpi optical (main scan) 3200 dpi with micro-step (sub-scan)
Output resolution:	50 dpi to 6400 dpi (1 dpi steps) 12,800 dpi (selectable with zoom function)
Color separation:	RGB color filters on CCD
Reading sequence:	
Monochrome	One-pass scanning
Color page sequence	Three-pass scanning (R, G, B) (This sequence is not supported by EPSON TWAIN Pro.)
Color byte sequence	One-pass scanning (R, G, B)
Color line sequence	One-pass scanning (R, G, B)
Zoom:	50% to 200% in 1% steps
Image data:	12 bits per pixel per color internal 1 to 12 bits per pixel per color external
Brightness:	7 levels (In EPSON TWAIN Pro, Gamma correction controls Brightness.)
Line Art settings:	Fixed threshold Text Enhancement Technology (enable/disable selectable)

Halftoning process:	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 (2 downloadable dither patterns)
Gamma correction:	2 types for CRT display 3 types for printer 1 type for user-defined (Only user-defined Gamma correction is available in EPSON TWAIN Pro.)
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 (Only user-defined Color correction is available in EPSON TWAIN Pro.)
Interface:	SCSI (50-pin half pitch connectors)
Light source:	White cold cathode fluorescent lamp
Reliability:	100,000 cycles of carriage movements (main unit MCBF)
Dimensions:	Width: 332 mm (13 inches) Depth: 562 mm (22.1 inches) Height: 134 mm (5.3 inches)
Weight:	Approx. 8.5 kg (18.7 lb)

---

## Electrical

	100 to 120 V AC	220 to 240 V AC
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	0.8 A	0.4 A
Power consumption	Approx. 40 W	

**Note:**

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

---

## Environmental

Temperature:

Operation	5° C to 35° C (41° F to 95° F)
Storage	-25° C to 60° C (-13° F to 140° F) -20° C to 60° C (-4° F to 140° F) When using ADF or TPU.

Humidity:

Operation	10% to 80%, without condensation 20% to 80%, without condensation when using the ADF
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.*

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## ***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***

### 230V model:

Low Voltage Directive 73/23/EEC

EMC Directive 89/336/EEC

EN 60950

EN 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
    - (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 2)
- ID Setting: Selectable from 0 to 7
- Terminator: Internal terminator selectable (enable/disable)
- Connector type: Two half-pitch 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"><li>* The scanner is turned on.</li><li>* The scanner receives a SCSI Reset signal from the SCSI interface.</li></ul>
Software initialization	<ul style="list-style-type: none"><li>* Software sends the ESC @ (initialize the scanner) command.</li><li>* The scanner receives a SCSI Bus Device Message.</li></ul>





*Appendix B*

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***Contacting Customer Support***

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For Australia Users . . . . . B-5

For Singapore Users . . . . . B-6

For Hong Kong Users . . . . . B-7

For Philippines Users . . . . . B-8



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

We will be able to help you 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, 98, 3.1, NT 4.0, and so on):

Software application(s) you normally use with your scanner and their version number(s):

---

## *For United Kingdom and the Republic of Ireland Users*

If you purchased your printer in the UK or the Republic of Ireland, EPSON (UK) Limited provides a range of customer services and technical support:

- World Wide Web
- Faxon EPSON Faxback
- Bulletin Board Service
- Customer and Warranty Support
- Pre-Sales Enquiry Desk

See the following sections for details.

### *World Wide Web*

If you can connect to the Internet and have a Web browser, you can access our Web site at <http://www.epson.co.uk>. Here you will find information on the latest EPSON products, software drivers, on-line user guides, and answers to frequently asked questions.

**B**

### *Faxon EPSON*

Contact Faxon EPSON Faxback Service for support information including troubleshooting tips, switch settings, and driver information.

To use Faxon EPSON, call 01442 227332 in the UK or 0044 1442 227332 from the Republic of Ireland using a touch-tone phone. You will be asked to follow a simple routine to register your document request. 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.

### *Bulletin Board Service for latest drivers and utilities*

You can call the EPSON Bulletin Board Service on 01442 227479 in the UK or 0044 1442 227479 from the Republic of Ireland. 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).

### *Customer and Warranty Support*

Our Customer and Warranty Support teams can be contacted by calling 0870 163 7766 in the UK or 0044 0870 163 7766 from the Republic of Ireland. They 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

A full list of EPSON Customer and Warranty Support services is available on the technical support section of our World Wide Web pages at <http://www.epson.co.uk/support/> and on Faxon EPSON Faxback service in document number 5085.

### *Pre-Sales 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 in the UK or 0044 1442 227271 from the Republic of Ireland, and via E-mail at [info@epson.co.uk](mailto:info@epson.co.uk). They can provide the following information:

- ❑ Pre-sales information and literature on new EPSON products (also available via our World Wide Web site at <http://www.epson.co.uk>)
- ❑ Where to purchase genuine EPSON consumables, accessories, and options

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## ***For Australia 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.

**B**

## *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.

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## *For Singapore Users*

Contact the telephone and fax numbers below:

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

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## *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 printer 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 printer information and the latest versions of printer 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  
Fax: (852) 2827-4383

**B**

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## *For Philippines Users*

To obtain technical support as well as other after sales services, users are welcome to contact the EPSON Philippines Representative Office at the telephone and fax numbers below:

Phone: (632) 813-6552  
Fax: (632) 813-6545  
BBS: (632) 814-0595



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# 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.

## ***bi-level data***

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

## ***bit***

Short for binary digit. The smallest unit of data in computer processing. A bit can represent two values: on and off, or 1 and 0.

## ***bit/pixel***

The unit that indicates the number of bits allocated for a pixel. The larger the bit value, the more detail of a pixel will be reproduced.

## ***brightness***

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

## ***byte***

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

## ***carriage***

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

## ***color correction***

A method of adjusting the color image data for a particular type of device so that the reproduction results 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.

## ***daisy chain***

A SCSI bus arrangement that allows several devices to be connected simultaneously in a line to a single computer. See *SCSI*.

## ***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 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***

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

***dropout color***

A color the scanner does not recognize and ignores. You can select and deselect dropout colors in the scanner software.

***ESC/I***

Abbreviation for EPSON Standard Code for Image scanners. A system of commands that allows you to control image scanners from your software.

***ESC/P***

Abbreviation for EPSON Standard Code for Printers. A system of commands that allows you to control printers from your software.

***grayscale***

Images represented with various shades of gray in addition to black and white.

***halftoning***

A method of reproducing images with patterns of dots to improve the quality of the output.

***home position***

The position at the rear (nearest the cover hinge position) of the scanner where the carriage rests before a scanning operation.

***imagesetter***

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

***impact dot printer***

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

***ink jet printer***

A printer that transfers ink onto the paper by spraying the ink through a number of small nozzles.

***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.

***plain bi-level***

Bi-level image data without the halftoning process.

***port***

An interface channel through which data is transmitted between devices.

***primary colors***

Basic colors. See *additive primary colors* and *subtractive primary colors*.

***resolution***

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

***scan***

An operation performed by the sensor and the carriage. The 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. This is one method used to connect your computer to peripherals such as scanners, hard disk drives, CD-ROM drives, and others.

***SCSI ID***

The numbers that all devices in a SCSI connection (see *daisy chain*) use to identify each other. If the same ID number is used by two devices in the same daisy chain, the devices cannot operate properly.

***subtractive primary colors***

The colors of 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.

***threshold***

A reference point that is used to determine whether data will be processed as “on” or “off”. In the case of color image data, “on” means that a certain color will appear in a pixel or dot, and “off” means that color will not appear there.

***tone correction***

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

***tone curve***

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

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COLOR IMAGE SCANNER

**GT-9600**

**User's Guide**