EPSON®

Stylus™ COLOR

COLOR INK JET PRINTER

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User's Guide

FCC Compliance Statement
For United States Users

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

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

WARNING

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

For Canadian Users

This digital apparatus does not exceed the Class B limits for radio noise emissions from digital apparatus as set out in the radio interference regulations of the Canadian Department of Communications.

Le présent appareil numérique n'émet pas de bruits radioélectriques dépassant les limites applicables aux appareils numériques de Classe B prescrites dans le règlement sur le brouillage radioélectrique édicté par le Ministère des Communications du Canada.

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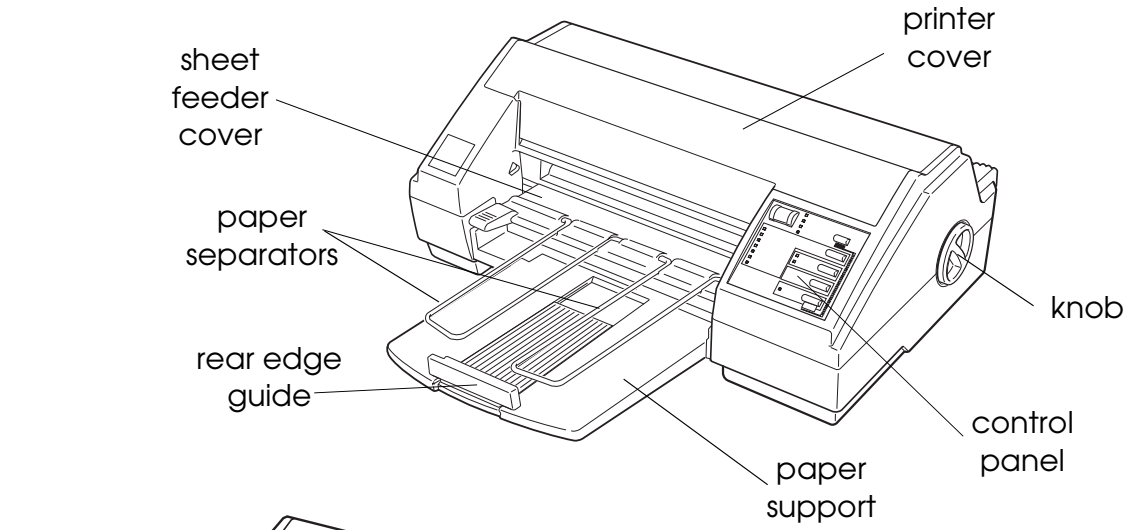
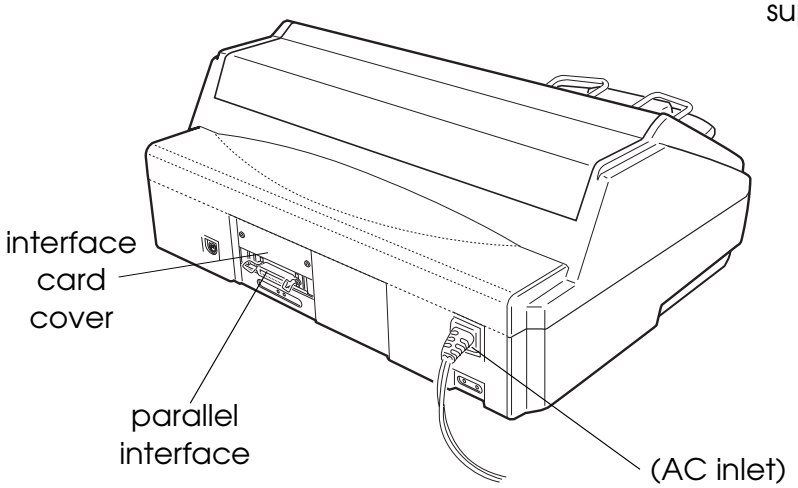
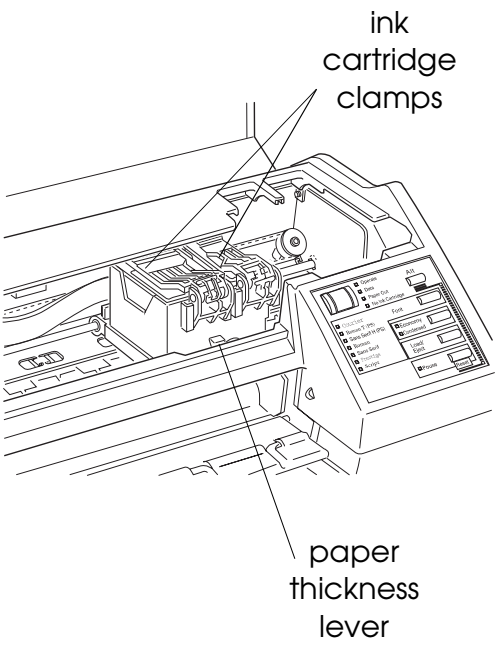
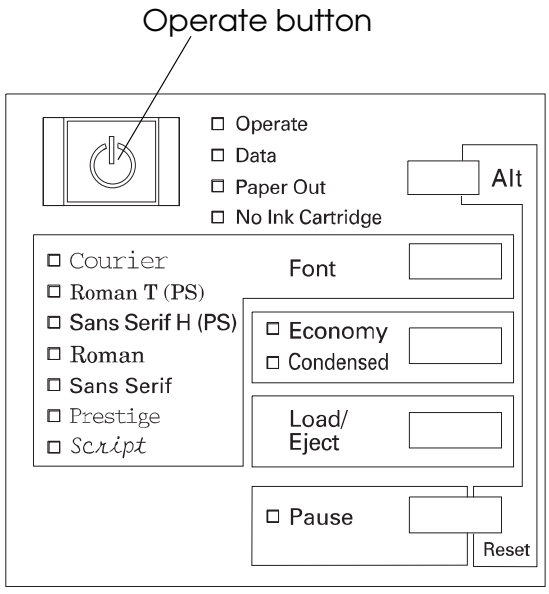






Control Panel



Getting Started

The EPSON® Stylus™ COLOR printer gives you presentation-quality color and monochrome printing with quiet operation.

To get started with your EPSON Stylus COLOR printer, please:

- ❑ Make sure you have the equipment you need to use this printer as described below in "System Requirements."
- ❑ Read about using energy wisely and the important safety instructions in this introduction.
- ❑ Read Chapter 1, "Setting Up," to test and install the Windows™ printer driver software.
- ❑ Refer to the rest of this *User's Guide* for help with selecting paper, choosing printer driver settings, maintenance, troubleshooting, optional interfaces, and printer specifications.
- ❑ See the *Color Printing Tips* booklet to learn to produce high-quality color documents.

If you need additional assistance, see "Where to Get Help for U.S. and Canadian Users" on page 3.

System Requirements

To use your EPSON Stylus COLOR printer, you need Microsoft® Windows 3.1 or higher or Windows for Workgroups 3.1 or higher, a shielded, twisted-pair parallel cable, and:

Minimum system	Recommended system
80386/16 MHz processor	80386/25 MHz or faster processor
4MB RAM	8MB RAM
10MB	More than 10MB free hard disk space
VGA monitor	VGA or better monitor

Your computer dealer can help you update your system if it does not meet these requirements.

Energy Star Compliant

Your EPSON Stylus COLOR printer complies with the U.S. Environmental Protection Agency's Energy Star Program, which promotes the manufacture of energy-efficient printers, computers, and monitors.

The EPA estimates that if all desktop computers, printers, and other peripheral devices met Energy Star standards, energy cost savings would exceed $1 billion annually and carbon dioxide emissions would be reduced by 20 million tons.

All of EPSON's ink jet printers conform to Energy Star standards.

The Energy Star emblem does not represent EPA endorsement of any product or service.

Energy-saving tips

Here are a few additional tips you can use to be even more energy-wise:

- ❑ If your monitor isn't Energy Star compliant, turn it off when you're not using it.
- ❑ Use the print preview option on your software before you print something. You'll be able to catch formatting errors before you commit them to paper.
- ❑ If you have an electronic mail system available to you, send E-mail rather than memos. Not only is this faster, but you'll save paper and storage space too.

Where to Get Help for U.S. and Canadian Users

Epson America provides local customer support and service through a nationwide network of authorized EPSON dealers and Service Centers.

EPSON also provides the support services listed below through EPSON Connection.SM U.S. users can call (800) 922-8911; Canadian users can call (800) GO-EPSON.

- ❑ Assistance in locating your nearest Authorized EPSON Reseller or Service Center
- ❑ Technical assistance with the installation, configuration, and operation of EPSON products
- ❑ EPSON technical information library fax service
- ❑ Product literature with technical specifications on EPSON's current and new products
- ❑ Customer Relations

You can purchase supplies, parts, documentation, and accessories by calling EPSON Accessories at (800) 873-7766 (U.S. sales only). In Canada, call (800) GO-EPSON for sales locations.

When you call for technical assistance, be ready to identify your system and its configuration, and provide any error messages to the support staff.

If you need help with any software application program you are using, see the documentation that came with that program for technical support information.

CompuServe® on-line support

The fastest way to access helpful tips, specifications, drivers, application notes, and bulletins is through the Epson America Forum on CompuServe.

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

- ❑ An introductory $15 credit on CompuServe
- ❑ Your own user ID and password
- ❑ A complimentary subscription to *CompuServe Magazine*, CompuServe's monthly publication.

To take advantage of this offer, call 1-800-848-8199 in the United States and Canada and ask for representative #529. In other countries, call (614) 529-1611 or your local CompuServe access number.

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

Important Safety Instructions

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

- ❑ Unplug the printer before cleaning. Clean with a damp cloth only. Do not spill liquid on the printer.
- ❑ Do not place the printer on an unstable surface or near a radiator or heat register.
- ❑ Do not block or cover the openings in the printer's cabinet. Do not insert objects through the slots.
- ❑ Use only the type of power source indicated on the printer'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 printer, 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 printer yourself.
- ❑ Unplug the printer and refer servicing to qualified service personnel under the following conditions:

  If the power cord or plug is damaged; if liquid has entered the printer, if the printer has been dropped or the cabinet damaged; if the printer does not operate normally or exhibits a distinct change in performance. Adjust only those controls that are covered by the operating instructions.

Chapter 1

Setting Up

1

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Using Your Ink Jet Printer Safely and Efficiently

The EPSON Stylus COLOR uses two ink cartridges, one black and one color. Inside the print head, tiny spray units shoot ink from the cartridges onto the page to form characters or graphics.

The printer will be damaged if you use ink or cartridges not manufactured by EPSON or which do not meet EPSON's specifications. Do not attempt to refill ink cartridges manually. If you use substandard products with your EPSON printer, you will damage the print heads and void your warranty.

- ❑ Under normal circumstances, ink will not come out of the cartridge. If it does get on your skin, wash it off with soap and water. If it gets in your eyes, flush them immediately with water.

- ❑ Keep ink cartridges out of the reach of children.

- ❑ Once you install an ink cartridge, do not open the clamp or remove the cartridge except to replace it with a new one. The cartridge may become unusable otherwise.

- ❑ Install an ink cartridge immediately after you remove it from its package. Leaving a cartridge unpacked for a long time before use may result in poor print quality.

- ❑ Do not use an ink cartridge beyond the date printed on the cartridge carton. Use up the ink cartridges within six months of installing them.

- ❑ Do not shake an ink cartridge; this can cause leakage.

- ❑ Do not put your hand inside the printer or touch the cartridge during printing.

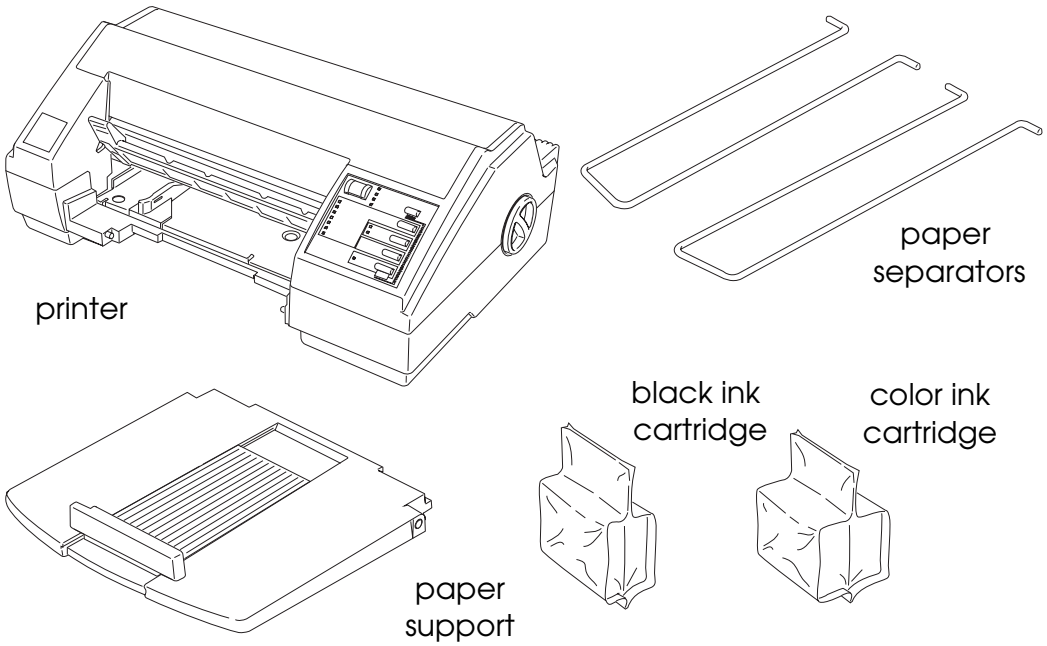
- ❑ Before you turn off the printer, make sure that the print head is capped (in the far right position). The print head is capped when no data is received for several seconds; you can also cap the print head by pressing the Pause button.

- ❑ Before you unplug the printer, be sure to turn it off by pressing the Operate button. Then wait until the Operate light stops flashing before unplugging the power cord or turning off the power to the electrical outlet.

- ❑ Do not remove the ink cartridges before transporting the printer.

Unpacking the Printer

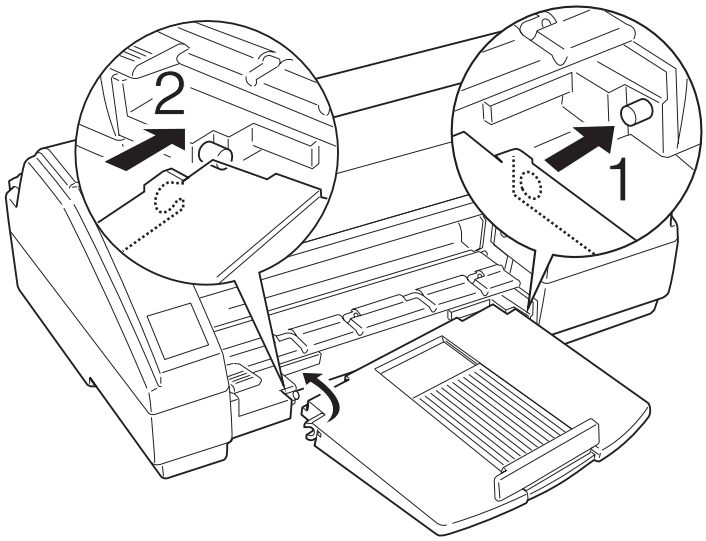
Your printer box should include an EPSON printer driver disk and these items:



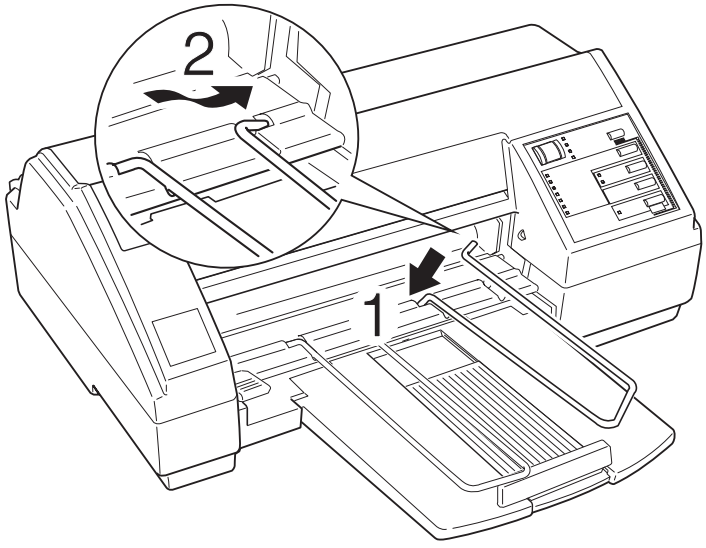
Remove all protective materials packed with your printer before you set it up and turn on the power. Follow the directions on the Notice Sheet (inserted with the printer) to remove these materials. Save all of the packaging and the protective materials in case you need to transport the printer in the future.

Attaching the paper support and the paper separators

1. Place the paper support's right side hole over the mounting post as shown in bubble 1 below. Then push the support's left side notch onto the mounting post until it snaps in place as shown in bubble 2.



2. Hold the wire paper separator, marked with an R near its shortest tip, and insert the longer tip into the third notch from the left, as shown by arrow 1 below. Next, twist the other tip and fit it in the fourth printer notch as shown by arrow 2 below. Repeat this procedure for the paper separator marked with an L.



Your Work Area

When choosing a location for your printer, follow these guidelines:

- ❑ Place the printer on a flat, horizontal, stable surface. If the printer is tilted, it cannot operate properly.

- ❑ Always leave approximately 2 inches of clear area next to the knob on the printer's right side. The printer will not print if anything is pressing against the knob.

- ❑ Avoid places subject to rapid changes in temperature and humidity. Also keep the printer away from direct sunlight, strong light, or heat sources.

- ❑ Place the printer near a wall outlet where the plug can be easily unplugged.

  Note for French-speaking users:
  Placez l'imprimante près d'une prise de contacte où la fiche peut être débranchée facilement.

- ❑ Use a grounded power outlet; do not use an adapter plug.

If you plan to use a printer stand, follow these guidelines:

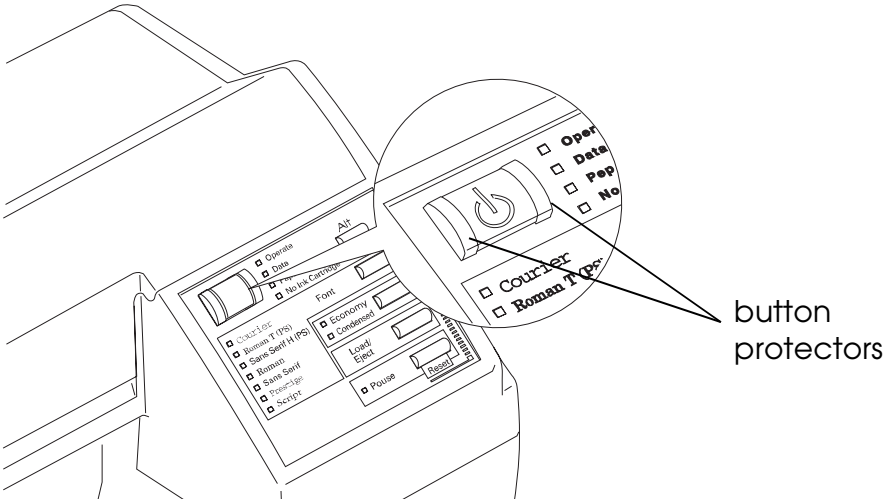
- ❑ Use a stand that supports at least 32 lb (14.8 kg).

- ❑ Never use a stand that tilts the printer. It should always be kept level.

Plugging in and Turning on the Printer

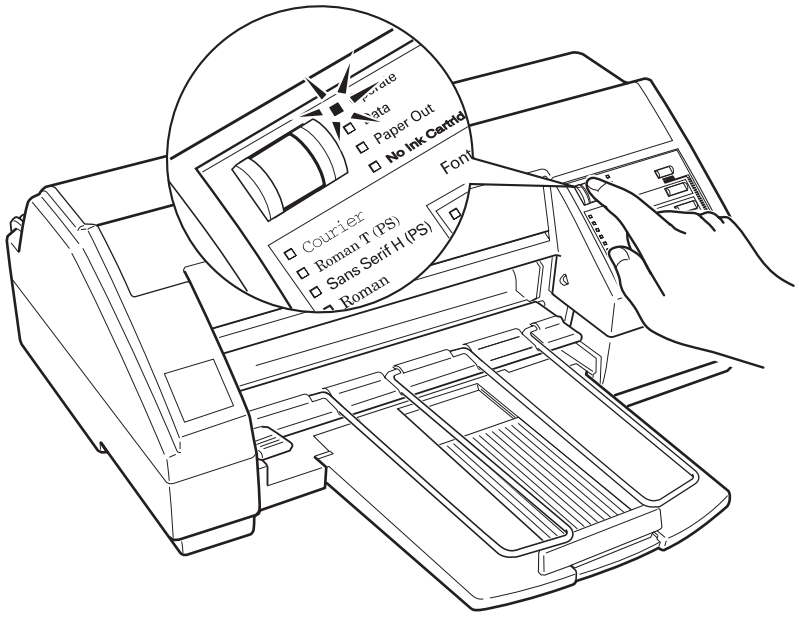
1. Make sure you have removed all protective packing materials as described in the Notice Sheet.

2. Make sure that the Operate button is turned off. It is off when its surface is even with the button protectors on the left and right.



3. Plug the power cord into a properly grounded electrical outlet.

4. Turn on the printer by pressing the Operate button as shown below.



Installing the Ink Cartridges

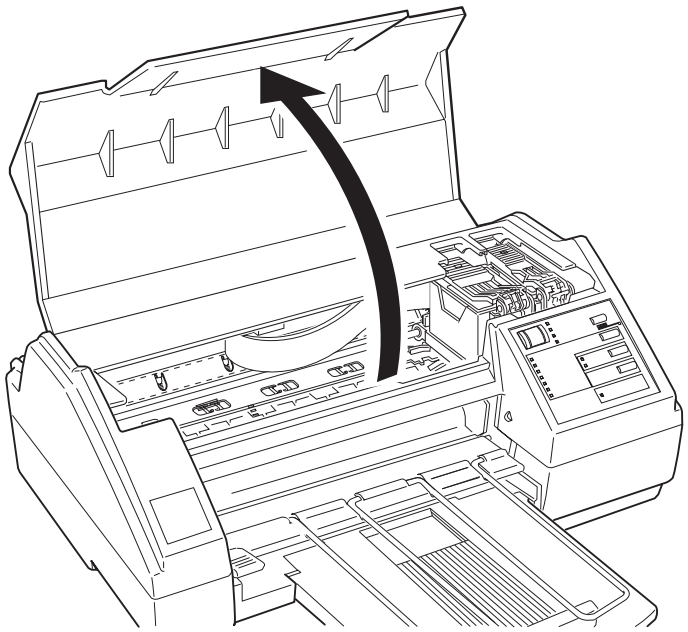
C ***Caution:***
The ink cartridges are self-contained units. Under ordinary use, ink will not leak from a cartridge. If ink does get on your hands, wash them thoroughly with soap and water. If ink gets into your eyes, flush them immediately with water.

Note:

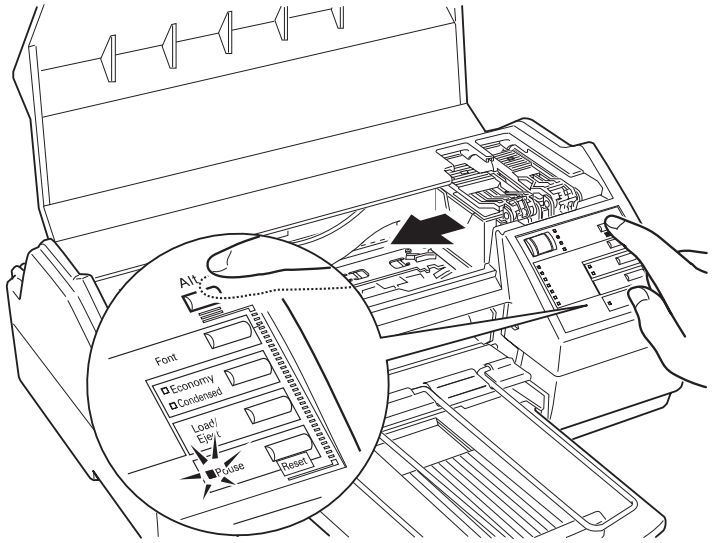
- ❑ *Do not open an ink cartridge package until just before you install the cartridge or the ink may become unusable.*

- ❑ *Install both ink cartridges. If either of the cartridges is not installed, the printer will not work.*

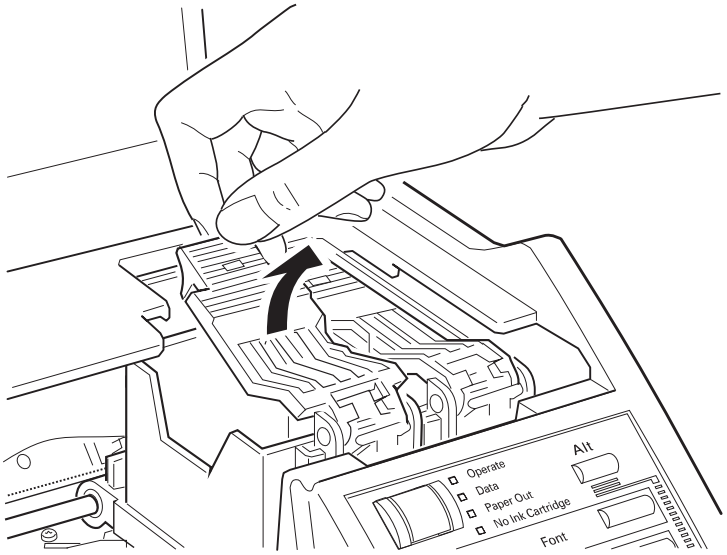
1. Make sure the printer is turned on, and then open the printer cover. Press the Pause button.



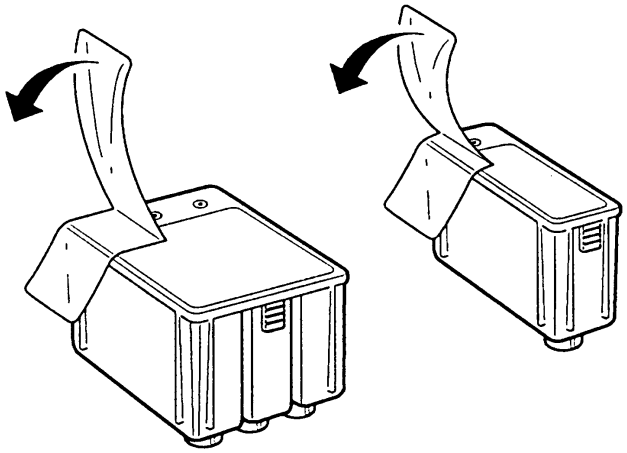
2. Hold down the Alt button for about 5 seconds until the print head moves very slightly to the left, which is the ink cartridge install position.



3. Pull each of the ink cartridge clamps toward you to open them.

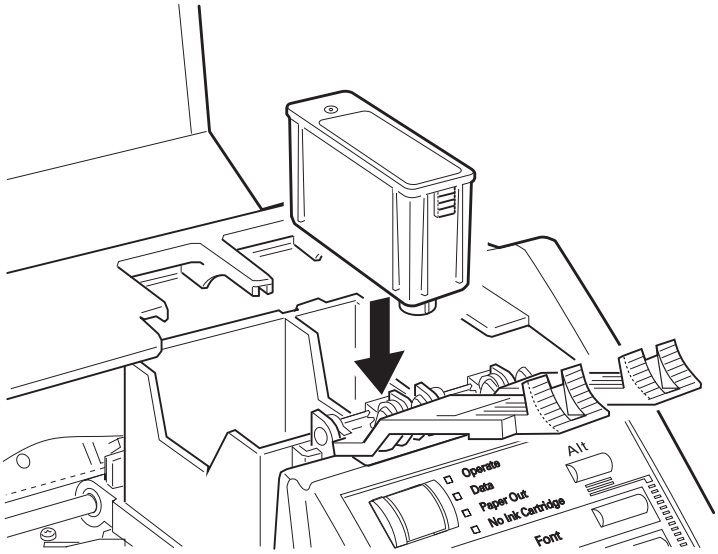


4. Open the foil ink cartridge packages and remove the cartridges from their protective cardboard. Remove the tape seal from each ink cartridge. (Your packaging may differ slightly from that shown below.)

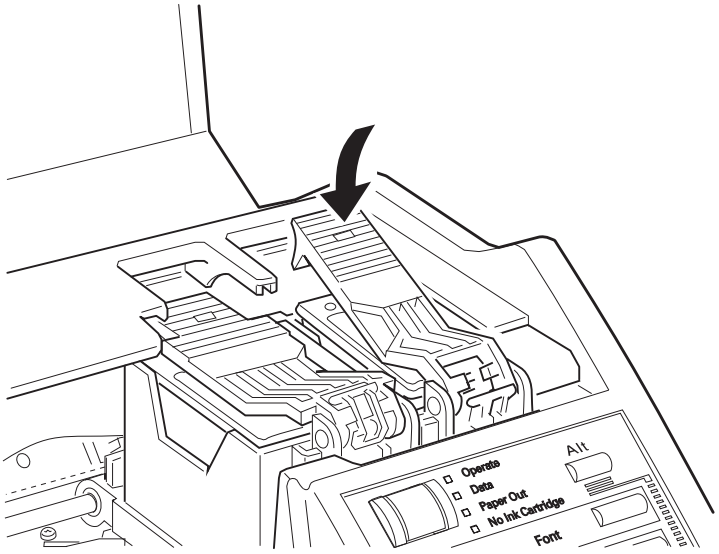


C ***Caution:***
You must remove the tape seal from the cartridges. Leaving the tape on will permanently damage them.

5. Lower the cartridges into their holders with the labels face up and the arrow on the top of the cartridge pointing toward the rear of the printer. The color cartridge, which is larger, goes on the left, the black ink cartridge on the right.

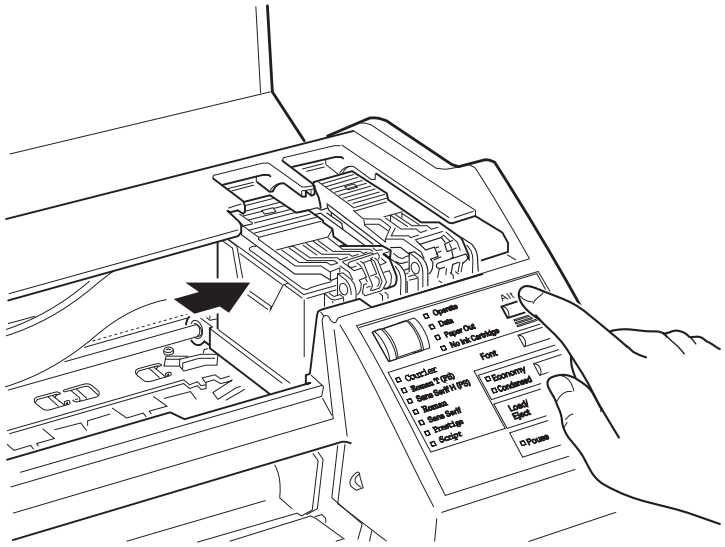


6. Push the ink cartridge clamps toward the back of the printer until they lock in place.



C ***Caution:***
Once you install the ink cartridges, do not open the clamps or remove them except to replace them with new ones. Otherwise, cartridges may become unusable.

7. Press the Alt button again to return the print head to its home position. (Even if you do not press Alt, the printer moves the print head back to its home position about 60 seconds after you install the cartridges.)



8. Close the printer cover.

   The first time you install ink cartridges, the printer automatically charges the ink delivery system. This takes about one minute. The printer mechanism moves while the system is charging.

   C ***Caution:***
   During the ink charging process, the Pause light flashes. Never turn off the printer while the Pause light is flashing.

9. Press the Pause button.

10. While holding down the Alt button, press the Font button. The carriage moves to the left.

11. Look at the small blue lever in front of the ink cartridges. Make sure that the left side of this lever is pressed down.

12. Press the Alt button.

13. Press the Pause button.

More about ink cartridges

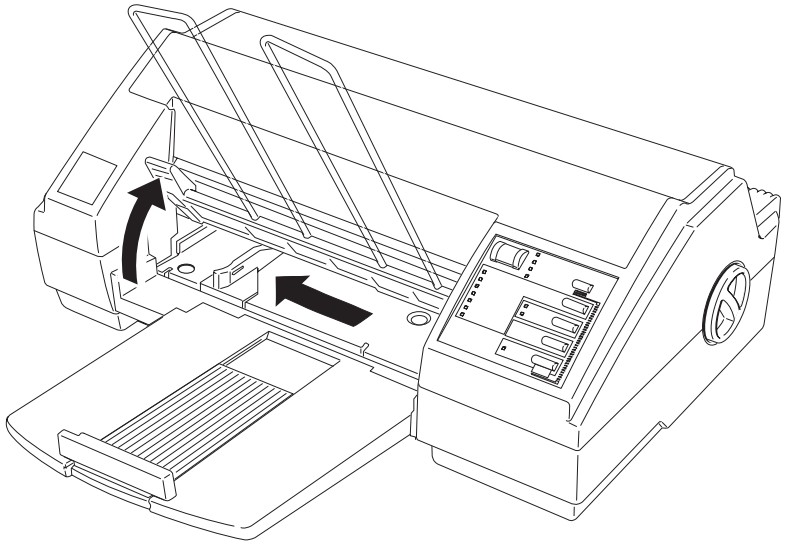
In order to maintain optimum print quality, the printer periodically performs a cleaning operation. You might notice the cleaning cycle being performed when the printer has been on for a while without being used or when you turn the printer on after it has been off for a while.

The number of pages a black ink cartridge can print depends on the amount of text and graphics you use. The number of pages a color cartridge can print depends on the amount of color you print. You can replace black and color ink cartridges independently. See Appendix A for ink cartridge capacities.

Loading Plain Paper

The following procedure describes how to load plain paper (copier-quality or paper specifically designed for ink jet printers), which works well for most color printing. To load coated papers for higher-quality output or to load transparencies and other special papers, see Chapter 2.

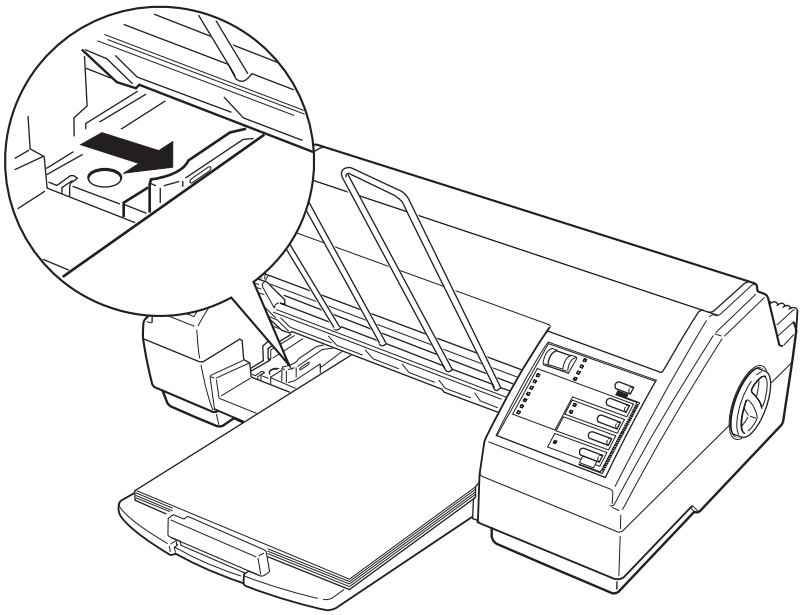
1. Open the sheet feeder cover by lifting the lever on the left until it clicks into place. Then slide the left edge guide as far to the left as it will go.



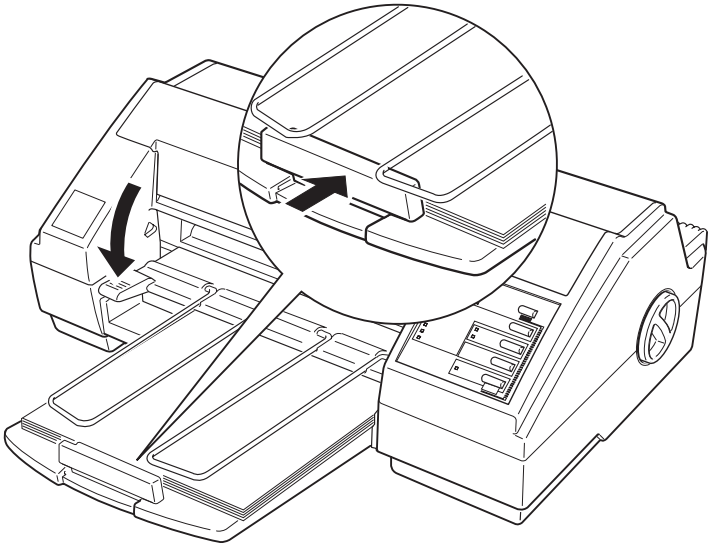
2. Fan a stack of paper; then tap it on a flat surface to even the edges.

   Note:
   The sheet feeder holds up to 100 sheets of 17-lb or 64-gm^2 paper. Do not load paper above the mark on the edge guide.

3. While aligning the paper's edge with the right edge guide, insert it with the printable surface (the printable surface is marked with an arrow on most plain paper packaging) face down into the sheet feeder until it meets resistance. Then adjust the left edge guide as shown.



4. Adjust the rear edge guide to match the length of your paper as shown below. Then close the sheet feeder cover.



Testing the Printer

Use paper at least 8.27 inches (210 mm) wide; otherwise the print head sprays ink directly on the platen, which could smudge your next document.

1. Make sure the printer is turned off.

2. While holding down the Load/Eject button, press the Operate (⏻) button.

   The self test begins by printing on the first and last lines of the first sheet of paper to measure the page length. Then the printer prints character samples on the next sheet of paper in the available fonts and colors.

3. To pause the test, press the Pause button. (The test may continue to print for a few seconds.) Otherwise, the test continues until the paper in the sheet feeder runs out. To resume the test, press the Pause button again.

4. To end the self test, press the Pause button and turn off the printer by pressing the Operate button.

Note:
Do not turn off the printer before pressing the Pause button. Otherwise, a cleaning cycle occurs when you turn it on again and ink is wasted.

If the quality of the test output is not good, clean the print heads as described in Chapter 5. Note that it might take as many as three cleaning cycles to solve the problem. If cleaning the print heads does not improve the print quality, see Chapter 6, "Troubleshooting."

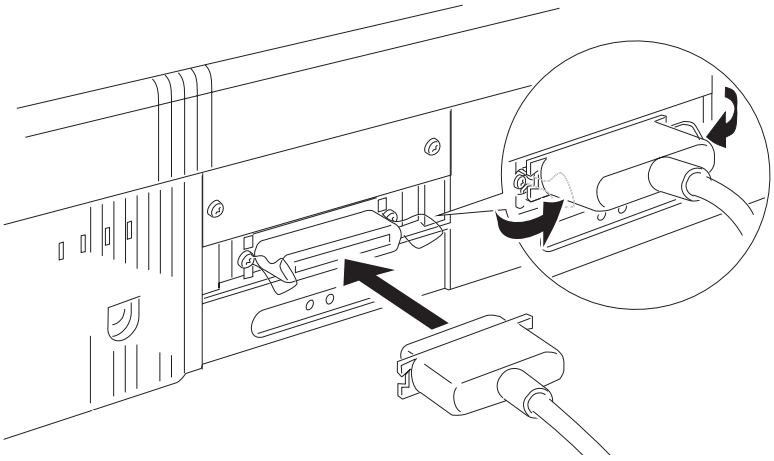
Connecting the Printer to Your Computer

You need a shielded, twisted-pair parallel cable to connect your computer to the printer's built-in parallel interface.

Note:
The printer also has an RS-422 serial port, which is standard for the Apple® Macintosh® but is not often used for PCs.

1. Make sure both the printer and computer are turned off.

2. Plug the cable connector securely into the printer's interface connector. Then squeeze the wire clips together until they lock in place on both sides.



3. Plug the other end of the cable into the computer's parallel interface.

Calibrating the Printer

Before calibrating the printer, make a backup copy of the EPSON printer driver disk. Then put away the original and use the backup for calibration and printer driver installation.

Use the print calibration utility to adjust your printer so that the vertical lines in text and graphics are correctly aligned. This ensures the highest possible quality printing.

You can calibrate your printer in either DOS or Windows. Just follow the appropriate steps below:

DOS

1. Insert the EPSON printer driver disk into drive A (or B).
2. At the DOS prompt, type A:CALIBRAT (or B:CALIBRAT).
3. Follow the instructions on the screen.

Windows

1. Open Program Manager in Windows.
2. Insert the EPSON printer driver disk into drive A (or B).
3. Pull down the File menu and choose Run.
4. When the Run dialog box appears, type A:CALIBRAT (or B:CALIBRAT) and press Enter.
5. Follow the instructions on the screen.

Recalibrating the printer

In most cases, you will only need to calibrate your printer once. If, however, your text or graphics print quality declines, repeat the calibration procedure.

Installing the EPSON Windows Printer Driver

Now that you have calibrated your printer, you can install the EPSON Windows printer driver. It allows your computer to communicate with the printer.

Always use this printer driver when you print from Windows; it is specifically designed to provide fast, sharp printing while optimizing all of the printer's features.

Note:
If you are not using Windows, choose the LQ-2550 printer driver in your software. This lets you print in color but does not give you some EPSON Stylus COLOR features, such as 720-dpi printing and MicroWeave.

1. Make sure Windows is running and that the Main window is open.

2. In the Main window, double-click the Control Panel icon.

3. Double-click the Printers icon. The Printers dialog box appears.

4. Click the Add button. A list of printers appears at the bottom of the box. Click Install Unlisted or Updated Printer once to highlight it and then click Install. The Install Driver box appears.

5. Insert the EPSON printer driver disk into your computer. Make sure the correct drive letter (A or B) is displayed in the Install Driver box and then choose OK.

6. The Add Unlisted or Updated Printer box appears. Select EPSON Stylus COLOR.

7. Click OK. Windows automatically copies the new printer driver to your hard disk and adds it to the list of installed printers.

8. Choose the Set As Default Printer button so that your printer is selected whenever you begin using your Windows software. Click Close.

If you want to use the driver's original factory settings, simply choose Print in your Windows software and then choose OK.

To customize the printer settings and learn more about printing in color with your Windows software, see Chapter 3, "Printing with Windows."

C

Caution:

Color printing of large photographs may require a large amount of free hard disk space.

To let you get back to work more quickly, the Stylus COLOR sends print data to your hard disk for temporary storage before it is printed. The amount of hard disk space required depends on the size and complexity of the image and on the application you are using. Ordinary text and graphics use very little hard disk space, but photographic images in color can use more.

Although your Windows driver compresses data, a full-page color photographic image at 360 dpi may require 10MB to 20MB of hard disk space (or in some cases as much as 30MB). A full-page color photographic image at 720 dpi may require 40MB to 60MB, or in some cases up to 125MB.

If you plan to print large photographic images, be sure to have enough hard disk space available or do one of the following:

- *Reduce the size of your image.*
- *Reduce the resolution of your image.*

Chapter 2

Choosing and Loading Paper

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Special papers 2-2
Thick paper 2-3

Loading Paper 2-3
Loading plain paper 2-3
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Loading transparencies 2-5
Loading envelopes 2-6

Choosing Paper

While most correspondence-quality plain paper works well in your printer, you should be sure the paper is suitable for ink jet printers. For detailed paper specifications, see Appendix A.

Special papers

For the highest quality print output and overhead presentations, EPSON offers the following special papers:

- EPSON Special coated paper for 360 dpi (dots per inch) (S041028 for letter, S041025 for A4)

  Use this paper for high-quality 360 dpi output.

- EPSON Special coated paper for 720 dpi (S041029 for letter, S041026 for A4)

  This paper can be used only when printing at 720 dpi.

- EPSON High Quality Glossy paper (S041033)

  When you use this paper, choose Special coated paper 360 or Special coated paper 720 in the Media/Options section of the printer driver.

  Note:
  When printing at 720 dpi, use only EPSON Special coated paper for 720 dpi or High Quality Glossy paper.

- EPSON Transparency film (S041030 for letter, S041027 for A4)

  Use this film with 360 dpi printing to produce high-quality overhead transparency presentations. Do not use 720 dpi printing on transparencies.

Make sure to select the appropriate media type from the printer setup dialog box of your driver. See Chapter 3, "Printing with Windows," for information about changing printer driver settings.

Thick paper

You can also print on some kinds of thick paper and envelopes.

Note:
If your printing becomes faint when you print on thick paper, you need to adjust the paper-thickness lever as shown in steps 1 through 5 in "Loading envelopes," later in this chapter.

Make sure to select the appropriate paper type in your printer driver setup. See Chapter 3, "Printing with Windows," for information about changing printer driver settings.

Loading Paper

You can select from several paper types for your printer's built-in sheet feeder: plain paper, special ink jet paper, coated ink jet paper, transparency film, and envelopes.

Loading plain paper

To load plain paper, see "Loading Plain Paper" in Chapter 1.

Make sure to select "Plain Paper" as the paper type in your printer driver setup. See Chapter 3, "Printing with Windows," for information about changing printer driver settings.

Loading special coated and glossy paper

To load EPSON Special coated paper for 360 and 720 dpi and the EPSON High Quality Glossy paper:

1. Make sure the printable surface of the paper is face down. For coated paper, the printable side is whiter than the other side. For glossy paper, the printable side is face down when the cut corner is toward you on the right as you insert paper in the sheet feeder.

   C ***Caution:***
   Do not touch the printable surface; hold the sheets by their edges.

2. Insert the paper into the sheet feeder until it meets resistance. You can insert up to 70 sheets of coated paper and up to 50 sheets of glossy paper.

3. Select Special coated paper in the printer driver setup and either 360 or 720 dpi resolution.

   C ***Caution:***
   - *Do not print on 720 dpi paper with 360 dpi resolution; likewise, do not print on 360 dpi paper with 720 dpi resolution.*
   - *Return unused sheets to the original packaging. Unfavorable storage conditions, especially high temperature, humidity, and direct sunlight, can damage the paper.*

4. Adjust the left and rear edge guides so the paper feeds straight into the paper path.

If you have paper feed or paper jam problems, see Chapter 6, "Troubleshooting."

When you need more special paper, see your dealer or call EPSON Accessories at (800) 873-7766.

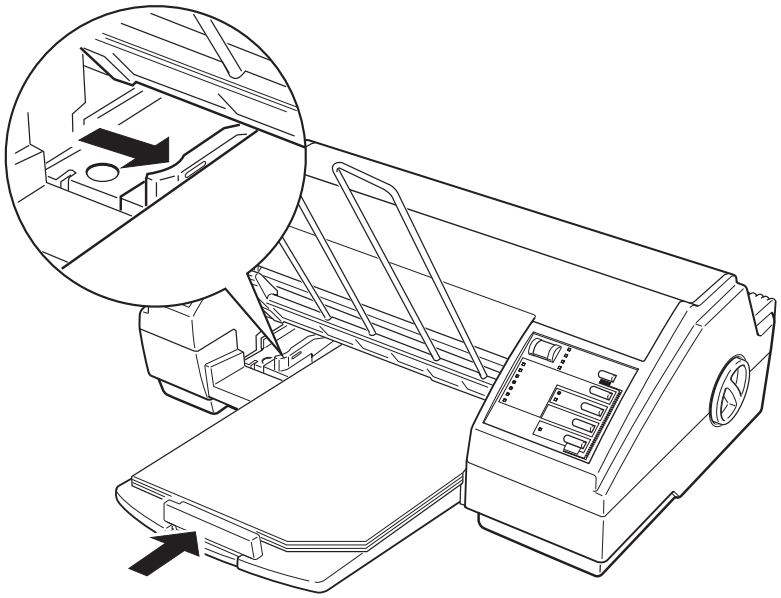
Loading transparencies

When printing on transparencies, use only *EPSON Transparency film* S041030 (Letter). For best results, use transparencies within six months of opening the package.

1. Make sure the printable surface of the transparencies is face down. The printable side is face down when the cut corner is on the bottom right as you hold the transparencies in front of you.

> C ***Caution:***
> *Do not touch the printable surface; hold the sheets by their edges.*

2. Insert up to 50 transparencies into the sheet feeder until they meet resistance.



3. Adjust the left and rear edge guides so that the transparencies feed straight into the paper path.

4. Select Transparency and 360 dpi resolution in the printer driver setup as shown in Chapter 3.

Caution:

- *Do not print on transparencies using 720 dpi resolution.*
- *Return unused sheets to the original packaging. Unfavorable storage conditions, especially high temperature, humidity, and direct sunlight, can damage transparencies.*

If you have paper feed or paper jam problems, see Chapter 6, "Troubleshooting."

When you need more transparencies, see your dealer or call EPSON Accessories at (800) 873-7766.

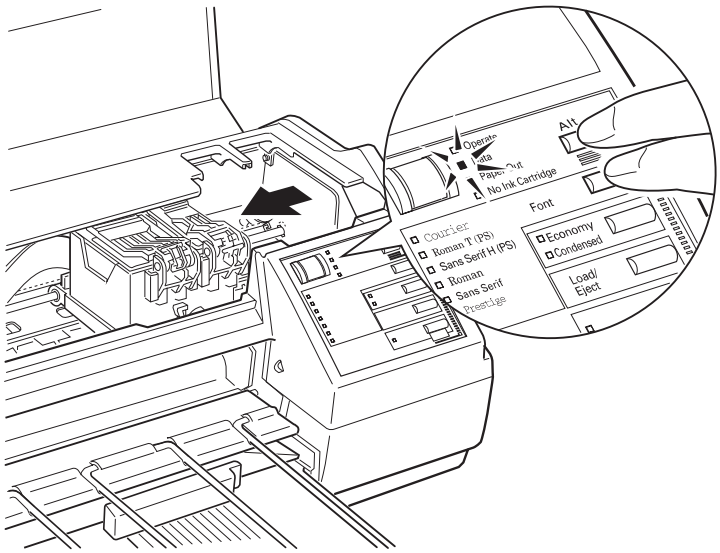
Loading envelopes

You can print up to 10 envelopes at a time. First you need to adjust the paper-thickness lever.

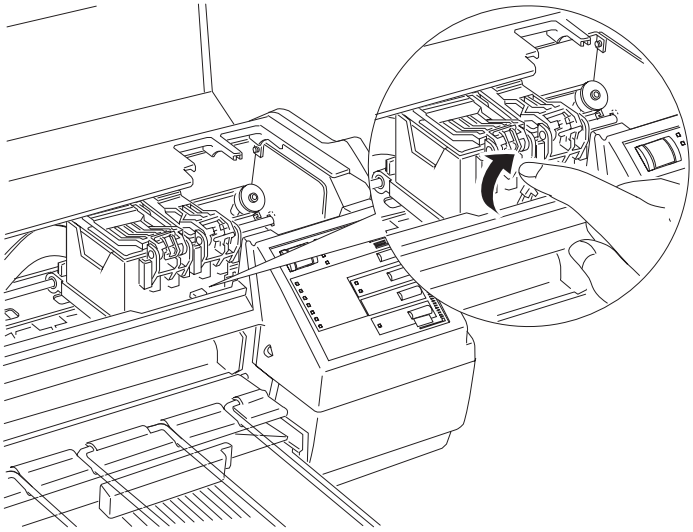
1. Make sure the printer is turned on. Then press the Pause button and open the cover.

   Note:
   When adjusting the paper-thickness lever, make sure no paper is in the paper path. Paper loaded in the printer is ejected when you adjust this lever.

2. While holding down the Alt button, press the Font button. The carriage moves to the lever-adjusting position.



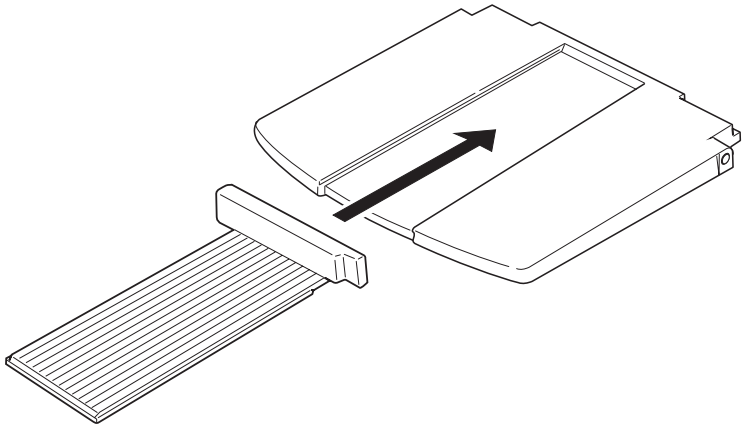
3. Turn the lever clockwise as far as it will go.



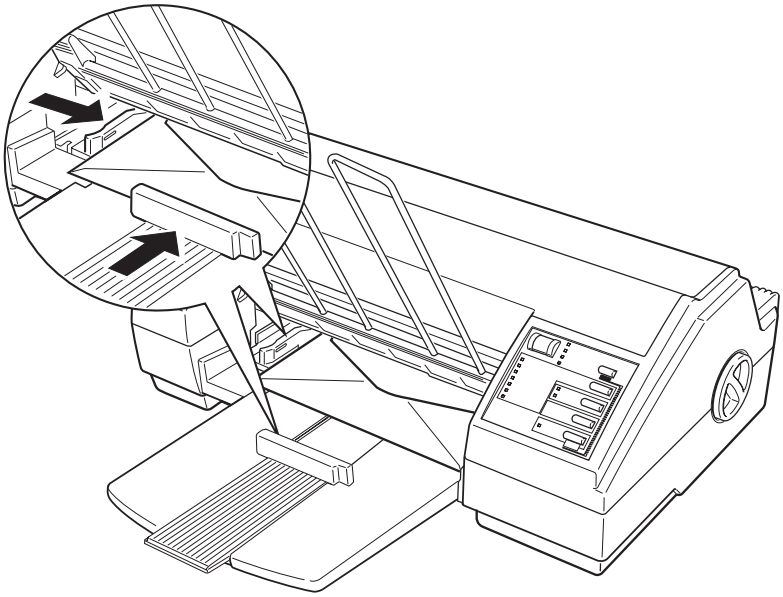
4. Press the Alt button.

5. Press the Pause button.

6. Remove the rear edge guide from the printer and re-install it as shown.



7. Insert up to 10 envelopes into the printer as shown.



8. Adjust the rear and left edge guides carefully so that the envelopes feed straight into the paper path.

9. Choose the envelope size (called paper type in your printer driver) from the printer driver setup as shown in Chapter 3.

Note:

- ❑ *Do not use envelopes that are too thin; they may curl during printing.*

- ❑ *Return unused envelopes to the original packaging. Unfavorable storage conditions, especially high temperature, humidity, and direct sunlight, can damage envelopes.*

- ❑ *Do not choose 720 dpi resolution for envelope printing.*

10. Re-adjust the paper-thickness lever to its original position after you finish printing on envelopes or thick paper. Otherwise, the print on plain paper may be faint.

Chapter 3

Printing with Windows

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About the Printer Driver

This chapter describes how to use the EPSON Windows (3.1 or higher) printer driver. You'll also find on-line help throughout the driver.

Note:
If you are not using Windows, choose the LQ-2550 printer driver in your software. This lets you print in color but does not give you some EPSON Stylus COLOR features, such as 720-dpi printing and MicroWeave.

A printer driver is a custom-designed program that works with the software on your computer to send codes that run (or "drive") your printer. These software codes select the page size, orientation, resolution, and other features of the document you are printing.

because color printing is more complex than black-and-white (monochrome) printing, results and print speed vary depending on printer driver and software settings. Therefore, it's important that you use the EPSON driver that comes with your EPSON Stylus COLOR and that you install it correctly by using the Printers icon in the Windows Control Panel. Installing the driver is described in Chapter 1, "Setting Up."

Note:
Be *sure you see* the section in this chapter *called "Before* Printing *for the First Time." If you do not choose the right settings, your printed output may be unsatisfactory.*

Using the Printer Driver

Your printer driver settings are divided into six categories which display as tabs. This table shows you the printer driver settings, dialog boxes, and options. It also lists factory settings.

Driver settings

Setting	Dialog box	Options
Paper	Paper size	**Letter (8 1/2 × 11 in)** Legal (8 1/2 × 14 in) A4 (210 × 297 mm) A5 (148 × 210 mm) B5 (182 × 257 mm) Statement (5 1/2 × 8 1/2 in) Executive (7 1/2 × 10 in) Envelope #10 (4 1/8 × 9 1/2 in) Envelope DL (110 × 220 mm) Envelope C5 (162 × 229 mm) 6 3/4" Envelope (3 5/8 × 6 1/2 in)
	Orientation	**Portrait** Landscape
	Paper source	**Auto Sheet Feeder**
	Copies	Number (l-99) Collate (☒ = on, ☐ = off) Reverse order print (☒ = on, ☐ = off)
Media/ Options	Paper type	**Plain paper** Special coated paper 360 dpi Special coated paper 720 dpi Transparency film
	Print options	**High Speed** (☒ = **on,** ☐ = off MicroWeave (☒ = on, ☐ = **off**)

Options in bold type indicate the driver's factory default settings.

An asterisk indicates settings not available when Monochrome is selected

Driver settings (continued)

Setting	Dialog box	Options
Image Settings	Brightness	-50% - **0%** - 50%
	Contrast	-50% - **0%** - 50%
	Enable ink density correction	☒ **= on** ☐ = Off
	Saturation*	-50% - **0%** - 50%
	Red Strength*	-50% - **0%** - 50%
	Green strength*	-50% - **0%** - 50%
	Blue strength*	-50% **0%** - 50%
	Enable ink color correction*	☒ **= on** ☐ = off
Ink/ Resolution	Ink	Monochrome **Color (CMYK)**
	Resolution	Super - 720 x 720 dpi **Best - 360 x 360 dpi** Draft - 180 x 180 dpi
Halftoning	Halftone	No halftoning Line art pattern Fine dither pattern Coarse dither pattern Diffused (Pencil art) Diffused (High speed) **Diffused (Images)** Diffused (Complex Diagrams)
About	[Printer driver information]	N/A

Options in bold type indicate the driver's factory default settings.

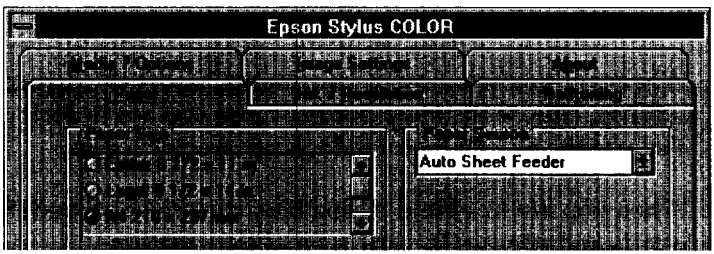
An asterisk indicates settings not available when Monochrome is selected

Displaying the dialog boxes

You can display the driver setup screen in two ways:

- Double-click the Printers icon in the Control Panel dialog box. Then click Epson Stylus COLOR in the Installed Printers list box to highlight it and click the Setup button.
- Choose Print Setup or a similar name from the File menu of your software. Highlight Epson Stylus Color in the Installed Printers list box and then click the Setup button.

When you display the driver setup screen, the Paper dialog box appears. The top of the screen looks like this:



Choosing settings

You can select settings in any of the following ways:

- Click the option button or name
- Click the check box
- Click the scroll box on the scroll bar and drag it
- Click the drop-down list box, then click the item
- Click the text box, then enter the number
- Hold down the Alt key on your computer keyboard and type the underlined character representing the setting.

Saving settings

When you have selected the settings you want and you're ready to print, choose the OK button. This exits you from the driver setup and saves your selections. Your settings stay in effect until you make additional changes and choose the OK button again.

Restoring prior settings

If you decide you **want** to use the driver's original factory settings, click the Defaults button,

Getting help

Whenever you want more information about the driver settings, choose the Help button. Once you are in Help, you **can** also use the Search menu to look up specific topics.

When you are in a Help dialog box, click once on underlined words and phrases to view related information.

If you want more information about using Help, see your *Microsoft Windows User's Guide.*

Exiting the driver

There are two ways to exit the setup screen:

- Click the OK button to save all settings you made and exit the printer driver.
- Click the Cancel button to ignore all changes you made during your current printer driver setup session and exit the printer driver.

Before Printing for the First Time

Before you start printing, there are a few things you should know about printing with color in order to get the results you expect.

About printing with color

We recommend you read the color guide that came with your printer before you begin printing. Keep in mind these guidelines for improving printed output:

- You can often improve quality by using the right paper.
- For highest quality printing, always turn on MicroWeave and turn off High Speed in the Media/Options section of the printer driver.
- You can make adjustments in the software you use to create your documents.
- With scanned documents, you can adjust scanner settings.
- You can make adjustments through your printer driver.

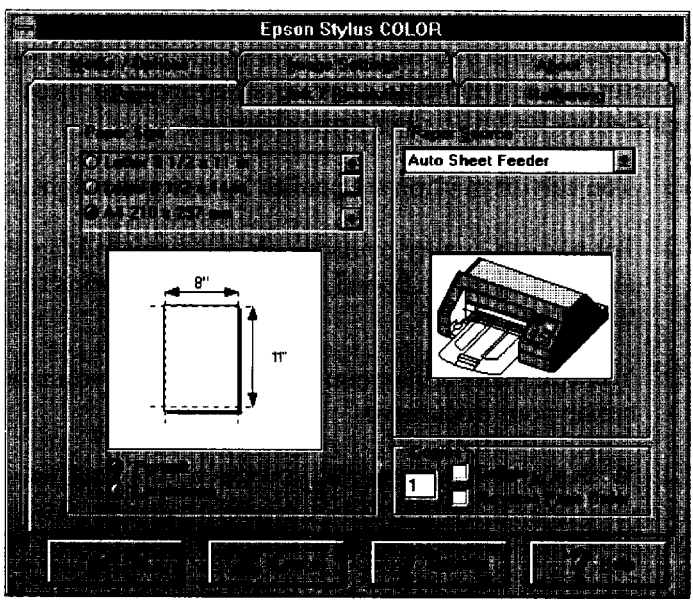
Choosing required settings

Choose the following driver settings to match your document requirements:

Paper size	The size of the paper loaded in the printer.
Orientation	The direction of printing on the document.
Resolution	The number of dots per inch printed.
Ink	Monochrome (black) or color (CMYK) ink.

Note:
The following procedure assumes you are using 360 dpi resolution and plain paper for your document.

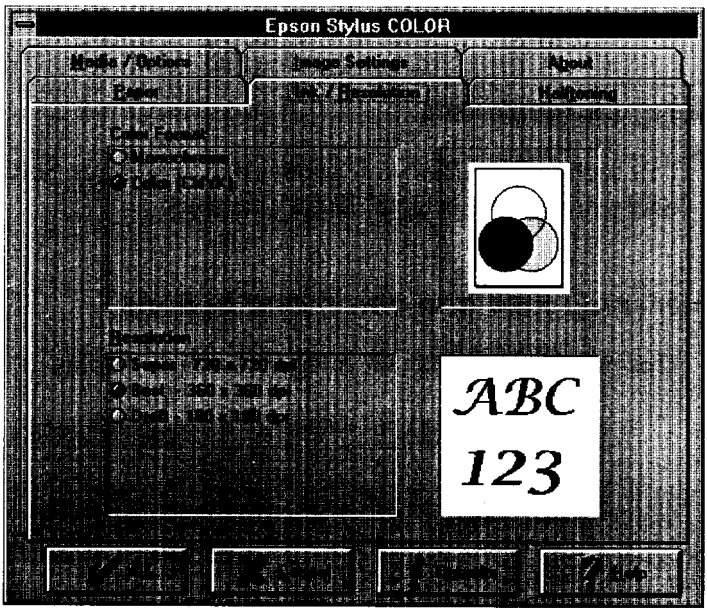
1. Click the Setup button in the Print Setup dialog box. You see the following:



2. Select the paper size you have loaded in the printer from the Paper Size drop-down list box. The diagram on the screen changes the printable area according to the paper size you select.

3. Select Portrait or Landscape orientation. Portrait is up and down orientation, landscape is lengthwise. If you would like to print your document lengthwise, select Landscape. The diagram on the screen changes according to the orientation you select.

4. Click the Ink/Resolution tab at the top of the dialog box. You see the following:



5. Select the Ink option. Select Color (CMYK) only when your document includes color.

6. Select the Resolution.

7. Click the OK button at the bottom of the dialog box.

Note:

- *To print with 720 dpi resolution* **or** *use special coated paper or transparencies, you need to change other settings. See "Setting Descriptions" below.*

- *The 360 x 360 dpi - Best option is suitable for most types of documents. The 180 x 180 dpi - Draft option is useful for faster printing.*

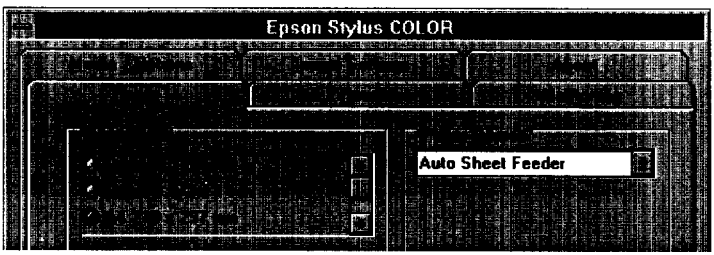
Now print your document. A window with information about the print job appears on the screen. This is the Despooler screen, which is explained at the end of this chapter.

Setting Descriptions

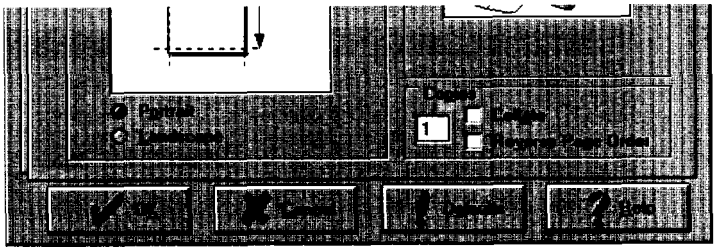
This section describes your printer driver settings. Settings in bold print are the original factory settings.

Driver setup tubs and command buttons

This printer driver has six categories which display as tabs.



Click a tab to make your selection. The dialog box appears. These four command buttons appear at the bottom of the screen:



OK

Saves your settings and exits the driver setup. Any changes you made go into effect when you exit using this button.

Cancel

Cancels all setting changes you made during your current printer driver setup session and exits the driver setup.

Defaults

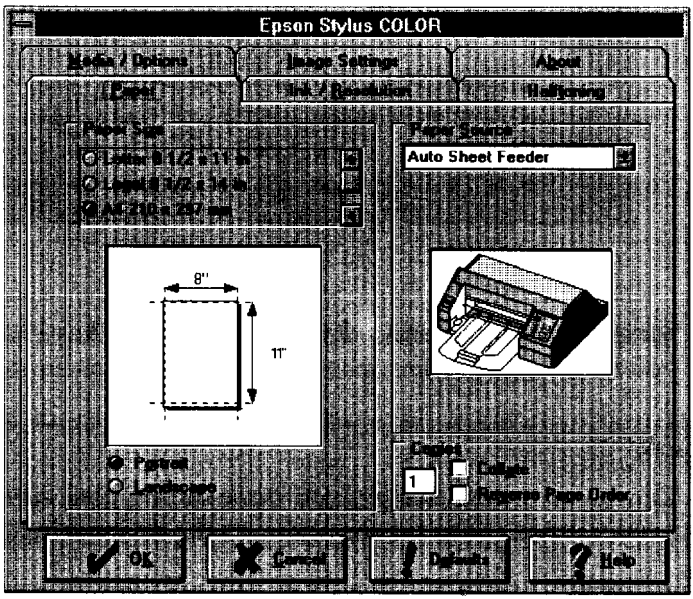
Cancels all settings you made in your current printer driver setup session and returns to the driver's factory default settings.

Help

Displays help dialog boxes for the printer driver. To exit Help, click Exit in the File menu within Help or click anywhere outside a help dialog box.

Paper

Select the paper size, orientation, paper source, and number of copies.



Paper size

This drop-down list box displays the available paper sizes. Select the paper size you loaded in the printer. The diagram changes according to the paper size you select and displays the printable area dimensions. Your choices are:

Letter	8 **1/2 × 11 in**
Legal	8 1/2 × 14 in
A4	210 × 297 mm
A5	148 × 210 mm
B5	182 × 257 mm
Statement	5 1/2 × 8 1/2 in
Executive	7 1/2 × 10 in
Envelope #10	4 1/8 × 9 1/2
Envelope DL	110 × 220 mm
Envelope C5	162 × 229 mm
6 3/4 Envelope	3 5/8 × 6 1/2 in

Orientation

You can select the direction of the print on a document. To change the orientation, click the appropriate option button. Portrait prints up and down, Landscape prints lengthwise.

Portrait
Landscape

Paper Source

Your printer has a built-in sheet feeder, so you do not need to change this setting.

Auto sheet feeder

Copies

Note:
In most cases you should choose multiple copies with your application software, not with the driver. Be sure that you do not choose multiple copies in both *the application and the driver.*

You can print multiple copies using these settings. To select multiple copies of your document, click the copies text box and then enter the number from your keyboard.

1 to *99*

Collate
Reverse Page Order

The Collate and Reverse Page Order options are factory-set to **Off.**

Note:
Because these settings often require additional system memory and hard disk space and may conflict with your software settings, keep them turned off. *Use them only* for *special circumstances.*

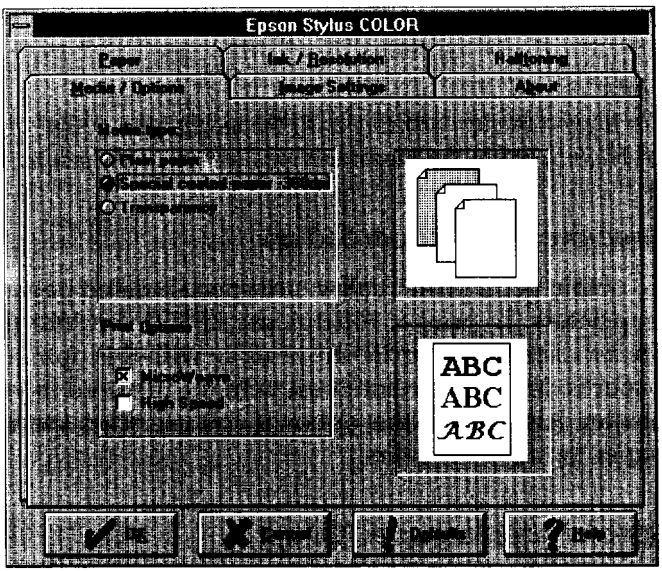
- ❑ To print multiple-page documents in sets, set Collate to on by clicking the check box so that an ☒ appears.

- ❑ To print more than one document set so that each set is in the correct order after printing, click both the Collate and Reverse Page Order check boxes so that an ☒ appears in each one.

- ❑ To print one multiple-page document so that its pages are in the correct order after printing, click Reverse Page Order so that an ☒ appears.

Media/Options

Use the Media /Options tab to select paper type and printing options.



For highest quality printing, always turn off High Speed in the Media/Options section of the printer driver.

Media type

Your Stylus COLOR can print on most types of paper. However, to get the best printing results, it is important to match the driver settings to your paper type. The available paper types are:

Plain Paper
Special coated paper 360 dpi
Special coated paper 720 dpi
Transparency film

Plain paper

Select this option for most types of documents. You can use either standard office copier paper or paper suitable for ink jet printers. Select this option if your paper is not a special coated paper or transparency film.

Note:
For highest quality printing with the media types below, always turn off High Speed in the Media/Options section of the printer driver.

Special coated paper 360 dpi

To obtain good print quality, use special coated paper for ink jet printers. To print at 360 dpi, use *EPSON SO41028 (Letter) Special coated paper for 360 dpi printing* with this option. EPSON paper is designed to work best with the ink used in your printer. Also choose this option if you use other special coated paper for ink jet printers.

Special coated paper 720 dpi

To get the highest print quality, use *EPSON SO41029 (Letter) Special coated paper for 720 dpi printing* and select this option. You must use this EPSON paper for 720 dpi printing. Do not use this paper if you are not printing in 720 dpi resolution.

Transparent y film

To print transparencies, use *EPSON SO41030 (Letter) Transparencyfilm* and select this option. Use only 360 dpi resolution when printing transparencies, and use only EPSON transparency film.

Print Options

These options allow you to select high speed printing or MicroWeave, which gives you higher quality output.

High speed (☒ = on, ☐ = off)
MicroWeave (☒ = on, ☐ = off)

High Speed

When you select this option, the printer prints in both directions. Bi-directional printing is fast, but for highest quality printing, always turn off High Speed.

Note:
If the vertical lines in printing appear misaligned when you print with High Speed, you may need to calibrate the printer as described in Chapter 1, "Setting Up."

Micro Weave

When MicroWeave is selected, your printer generates superior output because sections are printed in finer increments. This reduces the possibility of banding-light horizontal lines in graphics. EPSON recommends you use special coated paper or transparency film when you use MicroWeave.

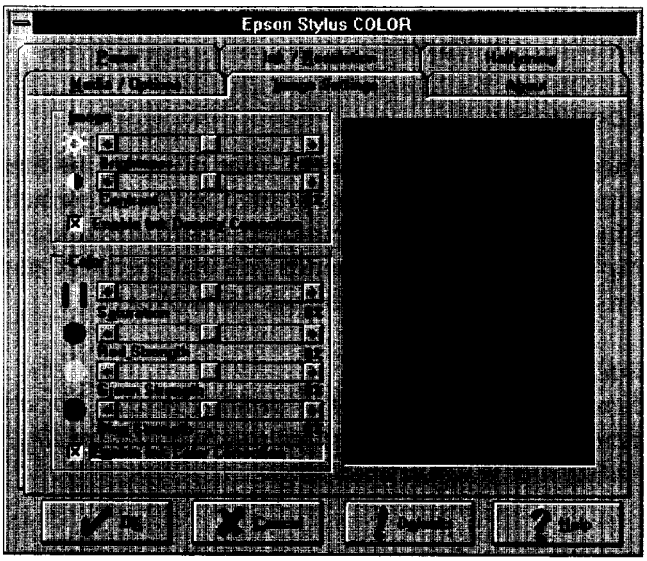
Note:
MicroWeave is recommended for printing in color. You can select MicroWeave for Monochrome printing to reduce banding, but the printing time is significantly longer.

Image Settings

You can modify a document's color (or gray scale) settings using this setting.

Note:
If you simply want to print high-quality color or black-and-white, do not change the original factory settings. To make adjustments in brightness, color, and other settings affecting printed output, use your computer software. However, if *your software does not allow you to make adjustments and you want to modify your images, experiment with the Image Settings dialog box until you achieve satisfactory results.*

When you select Image Settings, the following appears:



Note:

- *An image will appear in the dialog box* giving *you an impression* of *how your setting changes will* affect *printed images.*
- *You can replace the image by double-clicking the current image and using the dialog box to insert your own bitmap image.*

There are two setting categories within Image Settings: Image and Color.

Image

The Image settings include Brightness, Contrast, and Enable Ink Density Correction.

Brightness

The Brightness option changes the lightness or darkness of your image.

-50% - 0% - 50%

Contrast

The Contrast option changes the ratio between the brightest and the darkest parts of your image.

-50% - 0% - 50%

Enable Ink Density Correction

This setting takes into account the characteristics of the Stylus COLOR printer when it determines the amount of ink used to print the text or image. Printing with this option turned off usually produces dark images.

❑ = on
☐ = off

Color

The color settings allow you to modify the five color options: Saturation, Red Strength, Green Strength, Blue Strength, and Enable Ink Color Correction. (These settings cannot be changed when Monochrome is selected in the Ink/Resolution setting.)

Saturation

You can adjust the saturation (vividness of a color) using the scroll bar. Negative saturation produces colors that are duller than those produced with positive saturation.

-50% - 0% - 50%

Red/Green/Blue Strength

You can adjust the strength of each primary color (Red, Green, and Blue) using the scroll bar. Experiment with these settings if your printed colors do not appear as you expect and you cannot change the colors with your software.

-50% - 0% - 50%

Note:
Try using your software settings before you change printer settings to make color adjustments.

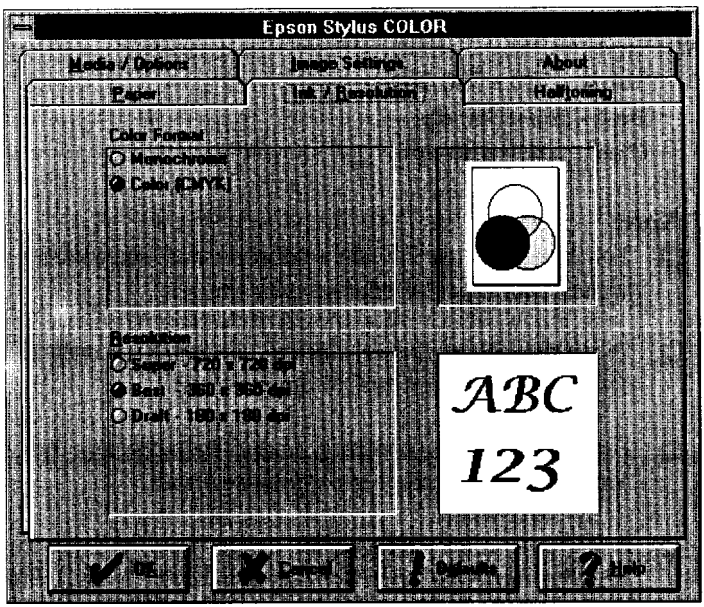
Enable Ink Color Correction

This setting takes into account the characteristics of the Stylus COLOR printer when it determines the colors of ink used to print the text or image. Printing with this option turned off usually produces dull colors.

☒ = on
☐ = off

Ink/Resolution

When you select Ink/Resolution, the following appears:



Use this tab to select the ink and resolution.

Ink

This setting lets you select either monochrome or color.

Monochrome
Color (CMYK)

Resolution

Three resolutions are available, but 360 x 360 dpi - Best is suitable for the majority of your documents. Keep in mind that the higher the resolution,the longer the printing time.

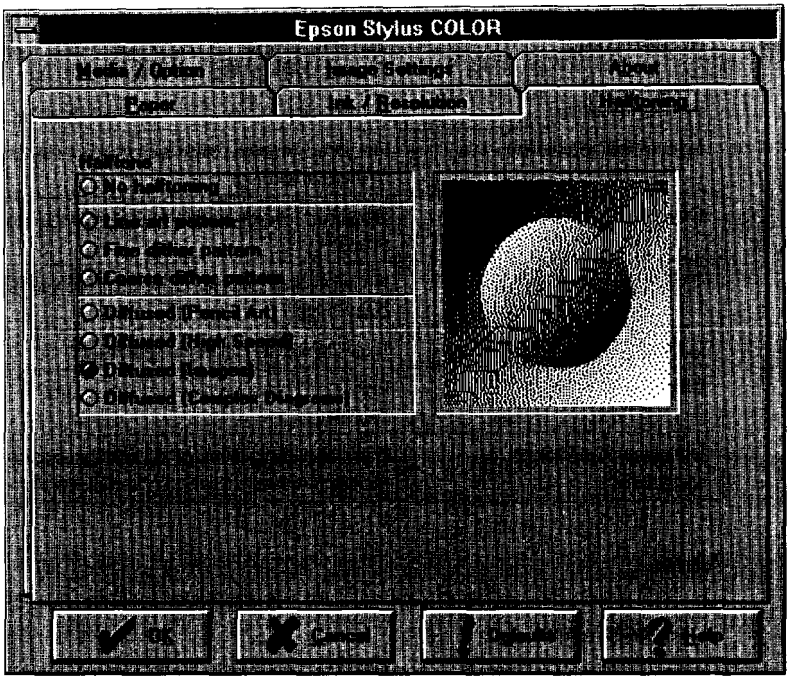
Super - 720 × 720 dpi
Best - 360 × 360 dpi
Draft - 180 × 180 dpi

Note:

- *You'll want to use 720 dpi resolution and MicroWeave for your highest-quality color photographic images.*
- *When you choose this resolution, you must use only EPSON Special coated paper for 720 dpi printing.*
- *For highest quality printing, always turn off High Speed in the Media/Options section of the printer driver.*
- *A half-page color photographic image at 360 dpi requires over 10MB of hard disk space (or over 20MB at 720 dpi). If you plan to print large photographic images, be sure to have enough hard disk space available or reduce the size or resolution of your image.*

Halftoning

When you select Halftoning, the following appears:



Halftone

The printer driver has seven halftoning settings-which you select according to the type of image you are printing-and a No halftoning selection. The halftoning image you select displays on the screen. You may need to experiment with different settings until your printed output is satisfactory.

Use this chart to select the appropriate halftoning method for your image:

Halftone method	Use for...
No halftoning	Black text and no graphics. This is the fastest setting. Do not use with color.
Line art pattern	Simple line art and computer graphics.
Fine dither pattern	Graphic images with significant detail but limited shading.
Coarse dither pattern	Graphic images with limited detail and shading.
Diffused (Pencil art)	Art with fine gradations, such as pencil drawings.
Diffused (High speed)	This is a faster holftoning setting.
Diffused (Images)	Photographic images or equivalent drawings.
Diffused (Complex diagrams)	Detailed diagrams or drawings, such as those produced with CorelDRAW!®

Note:

- ❑ *All four diffused methods give an air-brushed look to images and shaded areas.*
- ❑ *When printing at 720 dpi, only the four diffused methods are selectable.*

Caution:
Use the halftoning methods in the driver before you use the dithering options in your software.

About

This tab gives you general information about your printer driver.

Choosing the Best Settings for your Document

Use the Settings guide table below to help you get the best results with your Stylus COLOR.

Note:
When printing speed is important, remember that the following settings take more time than standard black-and-white text printing:

- ❑ *MicroWeave set to on with Monochrome*
- ❑ *Color (CMYK)*
- ❑ *Diffused halftone methods for complex printing*
- ❑ *Higher resolution*

Settings guide table

Printing type	Desired results	Minimum media setting	Suggested settings
Text and simple graphics	Sharp black text	Plain paper	360 dpi resolution Monochrome No halftoning
	Sharp black or color text and basic, non-gradated graphics	Plain paper	360 dpi resolution Color (CMYK) tine art pattern
	Low-detail pencil drawings	Plain paper	360 dpi resolution Monochrome Halftone Diffused (Pencil art)

Settings guide table (continued)

Printing type	Desired results	Minimum media setting	Suggested settings
Grayscale graphics	Clear, low-detail images	Plain poper	Monochrome Halftone Diffused (High speed) 360 dpi resolution
	High-quality, detailed diagrams or drawings	Plain paper	Monochrome Halftone Diffused (Complex Diagroms) 360 dpi resolution
	High-quality photographic Images or equivalent drawings	Special coated paper 360 dpi	Monochrome Halftone Diffused (Images) 360 dpi resolution
Complex Color Images	Sharp. color graphics or scanned images	Special coated paper 360 dpi	Color (CMYK) 360 dpi resolution Halftone - Diffused (Images) MicroWeave set to on
	Highest-quality, color graphics or scanned photographic images	Special coated paper - 720 dpi	Color (CMYK) 720 dpi resolution Halftone Diffused (Images) MicroWeave set to on
	Highest-quality color graphics or scanned images for overhead presentations	Transparency film	Color (CMYK) 360 dpi resolution Halftone - Diffused (Images) MicroWeave set to on

Printing Color with Selected Windows Software

You're ready to use your Windows software to make color selections for your documents.

Note:
If *you have not installed the EPSON Windows Printer Driver, see Chapter 1, "Setting Up."*

Making color selection in your software

The following table shows you how to locate color settings in some popular Windows applications.

The table may not include all the steps for using color in the application. For complete details, see your software documentation.

Quick co/or selection locator for Windows

Software Name	Action Desired	Action(s) or Selections(s) Required
Microsoft Word for Windows 2.0	Color text	Select text thot you wont to color Choose Character from Formot menu Choose color from Color drop-down
	Draw color graphics	Click drow icon in formatting ribbon Draw graphic with Tools Choose colors beside Line and Fill
WordPerfect® for Windows 5.1	Select text color	Select text that you wont to color Choose Color from Font menu Choose colors from Select Text Color
	Draw color graphics	Color graphics con be imported, but color cannot be changed or added
Microsoft Excel® 4.0	Select text color	Select cells that you wont to color Choose Font from Format menu Choose Color from color drop-down
	Select cell background color	Select cells that you wont to color Choose Patterns from Format menu Try the 3 cell shading options

Quick color selection locator for Windows (continued)

Software Name	Action Desired	Action(s) or Selections(s) Required
Aldus PageMaker@ 4.0	Customize color palette	Choose Define Colors from Element menu Use New ..., Edit ..., Copy .... or Remove command buttons
	Select text and graphics color	Choose Color Palette from Window menu Choose text tool in Tools menu Select what you want to color Choose the color in Colors window
CorelDRAW ! 2.01	Select fill color for objects	Select pointer tool from toolbox Select object you want to color Click color from Color Palette with Fill tool icon Choose Uniform fill icon from flyout menu Select color from UNIFORM FILL*
	Select color for text or object outlines	Select pointer tool from toolbox Select text or object outline to color Use Outline tool icon from toolbox Use Custom Outline Color tool icon Select color from one of six dialog boxes

* CorelDRAW! 2.01 offers additional dialog boxes for choosing colors, See your software documentation for details.

Printing your color Windows documents

After you locate and make your color selections, you can:

- ❑ Choose Print from your software to print the document using the current EPSON printer driver settings, or
- ❑ Choose Print and then Setup to access the EPSON printer driver settings. Once you make your setting selections, choose OK three times to print.

Remember that printing in color takes longer than printing in monochrome.

Printing Color with Selected DOS Software

Because the EPSON printer driver requires Windows, you cannot use it when working with non-Windows software. Instead, choose the LQ-2550 printer driver in your software. This lets you print in color but does not give you some EPSON Stylus COLOR features, such as 720dpi printing and MicroWeave.

Making color selection in your software

The following table shows you how to locate color settings in some popular DOS applications.

The table may not include all the steps for using color in the application. For complete details, see your software documentation.

Quick color selection locator for DOS

Software Name	Action Desired	Action(s) or Selections(s) Required
Microsoft Word 5.5	Select text color	Select text that you want to color Choose Format Character Select font name in Font box Select point size in Point Size box Select color in Color box
	Select paragraph shading	Place cursor in paragraph Choose Format Borders Select shading percentage
WordPerfect 5.1	Select new text color	Press Ctrl F8 Select Print Color (5) Select a color Press F7 Type text you want in color.
	Select text color	Move cursor right before text to color Press Ctrl F8 Select Print Color (5) Select a color Press F7 To end color text, move cursor just after color text Press Ctrl F8 Select Print Color (5) Select a color Press F7

Quick co/or *selection locator for DOS* (continued)

Software Name	Action Desired	Action(s) or Selections(s) Required
Lotus® 1-2-3® Rel. 2.3	Add color to text	Press Shift : > for WYSIWYG menu Select Format Select Color Select Text Select color Highlight range to color Press Enter
	Add color to graph	Press Shift : > for WYSIWYG menu Select Graph Select Edit Select cell in graph Press Enter Select object to color Select color Select Inside, Lines, Text, or Background Select color from palette Select quit
Freelance Graphics Rel. 4.0	Add color to objects	Choose Edit Choose Color Choose Edge or Inside Choose color
	Add color to charts	Choose Chart Choose Edit-data for Style menu Choose chart component to color Press space bar Choose color Press F10 to draw chart
Harvard Graphics 3.0	Add color to text on spreadsheets	Select Edit Chart Press F8 Select Text Attributes or other option Select color from color column Select F3 Select color Select F2
	Add color to objects	Select Edit Chart Press F4 Select object Select color icon Select fill, line/text, or shadow color Select color Select F4

Remember that printing in color takes longer than printing in monochrome.

The EPSON Spool Manager

When you print your document, the driver uses a print spool manager to send the data to your hard disk and then to the printer. Then it uses a despooler to print the data.

The EPSON Spool Manager icon appears when you send data to the printer. If you double-click the spool manager icon, a window appears that includes:

- A queue menu that allows you to place queues (lists of print jobs) on hold, release them to be printed, and identify if a queue is local or remote (network printing).
- A document menu that allows you to hold files from printing, re-order them for later printing, delete them from the queue, or save them for reprinting.
- A view menu that allows you to limit the amount of information that the spool manager displays and keep the despooler from appearing.
- An options menu that allows you to send files to a default directory, adjust timers, and adjust the default font for the spool manager window.

To view the EPSON Spool Manager Window:

1. Select Print from the File menu of your application software and choose to print a document.
2. Once the EPSON Spool Manager icon appears on your screen, double-click it. The EPSON Spool Manager Window appears.

3. The spool manager window shows you the list of printers supported by the EPSON Stylus series printing system and a list of files currently printing or waiting to print. If you wish to make changes affecting print timing or location (if you are sending a file over a network for remote printing), choose the Help menu in the EPSON Spool Manager window to learn about using the spool manager.

Note:

- *Files are called journals or journal files throughout Help.*
- *If you print a large complex color document file, the spool manager may break it down into smaller files to save hard disk space. This will* not affect printing.

The EPSON Despooler

After you send a file to the printer, a status box for the EPSON Despooler appears on the screen. The despooler processes your file in sections thereby producing documents more quickly. Once a section is finished, the despooler updates the status message and begins processing another section.

The status box includes the following information:

- The time it takes the document to be sent and printed.
- A series of bands representing the number of units into which the document is divided.
- A message telling you which page is printing.
- A message telling you which copy out of a total number of copies is printing.
- An About button that gives general information about the EPSON Despooler.

- A Help button to help you understand the EPSON Spool Manager.

- Three icons: Cancel - to cancel print, Pause - to pause print, and Restart - to restart from the current page, reprint the whole document, or delay printing.

If you want to keep the EPSON Despooler status box from appearing, use the View menu of the EPSON Spool Manager window.

Chapter 4

The Control Panel

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Using Special Power-On Functions 4-6

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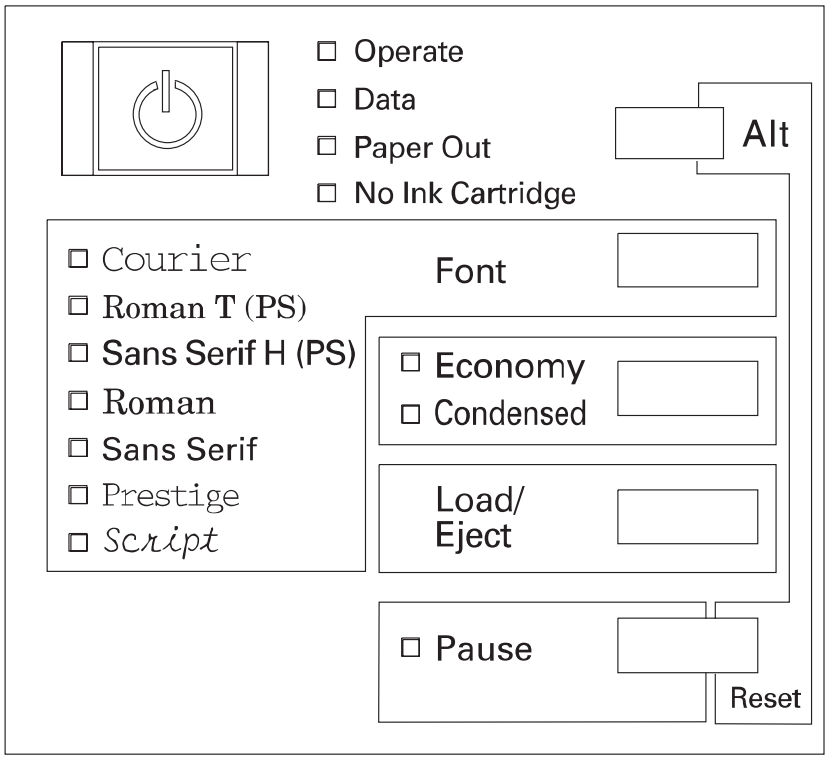
4

Using the Control Panel

The lights and buttons on the control panel give you easy control over most common printer operations.

Note:
Software usually overrides control panel selections. Use your software to select print functions whenever possible.



Lights

Operate

On when the printer is on. Flashes when the printer is turned on or off.

Data

Flashes when data is being received by the printer. On when data remains in the printer's memory.

Paper Out

On when the printer runs out of paper. Rapid flashing indicates a paper jam.

No Ink Cartridge

On when either ink cartridge is not installed. The printer will not work unless both cartridges are installed.

Font

Indicates the current font setting. For instructions on selecting fonts, see page 4-7.

Economy

On when the economy printing mode is selected. In economy mode the printer uses less ink by printing fewer dots per character. Use this mode for rough drafts of text only.

Condensed

On when the condensed-printing mode is selected. In this mode, the printer prints selected fonts so that more characters fit on a page. See page 4-9 for more information.

Pause

On when printing is paused. This light flashes when you clean the print heads or replace ink cartridges.

Note:
The Data and Pause lights flash when an error occurs.

Buttons

Operate

Turns the printer on and off.

C ***Caution:***
Always turn off the printer by pressing the Operate button. Then be sure to wait until the Operate light stops flashing before unplugging the printer.

Font

Press this button to cycle through the font choices on the control panel font menu. The Font lights indicate the current selection.

Load/Eject

Press this button to load or eject a sheet of paper.

Pause

Press this button to stop printing temporarily. Press it again to resume printing.

Economy/Condensed

Press this button to select economy or condensed mode. The indicator light goes on or off next to the mode you select.

Alt

Hold down this button about five seconds to move the carriage to the ink cartridge replace position when the Pause light is on. See "Replacing an Ink Cartridge" on page 5-2 for details.

The Alt button alters the functions of the other buttons. Hold down the Alt button and press another button to change the functions as follows:

Reset (Alt + Pause)

Clears the printer's buffer and initializes the printer settings to their factory settings. See "Initialization" in Appendix A.

Black print head cleaning (Alt + Load/Eject)

Starts the black print head cleaning cycle. See "Cleaning the Print Heads" on page 5-6 for details.

Color print head cleaning (Alt + Economy/Condensed)

Starts the color print head cleaning cycle. See "Cleaning the Print Heads" on page 5-6 for details.

Note:

- *Cleaning the print head uses ink. Don't do it unless print quality declines.*
- *When you clean a print head, the printer ejects the page you are currently printing.*

Paper-thickness adjust (Alt + Font)

For special papers, such as envelopes and transparencies, you should change the paper-thickness setting using this function. See "Loading Envelopes" on page 2-6 for details.

Using Special Power-On Functions

These functions are available when you hold down the following buttons when turning on the printer:

Self test (Operate + Load/Eject)

Checks the paper length and performs self-test printing. See Chapter 1, "Testing the Printer."

Hex dump (Operate + Font + Load/Eject)

Prints the print data in hexadecimal code. See page 6-5.

Demonstration (Operate + Alt)

Prints a demonstration page.

Default setting (Operate + Economy/Condensed)

Enters the default-setting mode. See "Using the Default-Setting Mode" on page 4-10 for details.

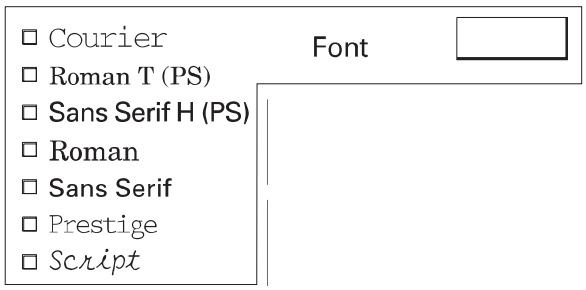
Note:
To exit the hex dump, demonstration, or default-setting modes, press the Pause button and then the Operate button to turn off the printer.

Selecting Fonts

Your printer has seven built-in character fonts including two new EPSON fonts: EPSON Roman T and EPSON Sans Serif H. (Roman T is similar to the Times™ font; Sans Serif H is similar to Helvetica.™)

Note:
Font selections you make with your software override your printer's control panel selections. For best results, use your software to select fonts.

Press the Font button to select from the seven fonts listed on the control panel. The indicator light comes on to indicate the active font.



The table below shows the available fonts.

Fonts	Sample
EPSON Courier	
EPSON Roman T	
EPSON Sans Serif H	
EPSON Roman	
EPSON Sans Serif	
EPSON Prestige	
EPSON Script	

Note:

- *Roman T and Sans Serif H fonts are available in proportional spacing only.*

- *Some of the character tables might not be able to print with EPSON Roman T and EPSON Sans Serif H fonts. In these cases, selected character tables are printed with EPSON Roman.*

Scalable fonts

The size of the Roman, Sans Serif, Roman T, and Sans Serif H fonts can be selected from 8 to 32 points in 2-point increments through your software or by sending an ESC/P 2™ command. See the documentation that came with your software for information on selecting the size of scalable fonts.

EPSON
Roman

EPSON
Roman T

scalable sample

EPSON
Sans Serif

EPSON
Sans Serif H

Selecting Condensed Printing

Condensed printing reduces the size of characters to approximately 60 percent of their normal width, allowing more characters to fit on a line. This is useful for spreadsheets and other applications where you need to print the maximum amount of information on a page.

You can condense the current font by pressing the Economy/Condensed button. (EPSON Roman T and EPSON Sans Serif H cannot be condensed.) You can condense printing that is 10 characters per inch (cpi), 12 cpi, and proportionally spaced. You cannot condense 15-cpi printing.

Note:
If your software controls fonts and can select the condensed mode, you should select fonts and condensed mode through the software rather than with the control panel. Program or command settings override control panel settings.

Using the Default-Setting Mode

You can change several printer settings that control a variety of functions such as print direction and loading position. Because these settings take effect each time you turn on the printer, they are called default settings.

The factory default settings are designed to meet the needs of most users, so you may not need to change them. The table below lists the features you can select in the default-setting mode.

Setting	Options
Print direction	Auto*, Bi-D, Uni-D
Network interface mode	On, Off*
Auto line feed	On, Off*
Loading position	3 mm, 8.5 mm*
Interface mode	Auto I/F mode*, Parallel I/F, Serial I/F, Option I/F
Auto interface wait mode	10 seconds*, 30 seconds
Character table	Italic U.S.A.*, Italic France, Italic Germany, Italic U.K., Italic Denmark, Italic Sweden, Italic Italy, Italic Spain I, PC437, PC850, PC860, PC863, PC865, PC861, BRASCII, or Abicomp

* Default setting

For details, see "About the default settings" below. To change a setting, see "Changing the default settings" on page 4-13.

Note:
Most software controls the character table and auto line feed. If your software controls these features, you may never need to set them with the control panel.

About the default settings

Print direction

Your printer has three direction settings: Uni-d, Bi-d, and Auto.

Note:
Most software controls this setting. If your software does, you may never need to set it with the control panel.

Uni-d causes the print head to print in one direction only. This provides maximum alignment for both graphics and character printing.

Bi-d causes the print head to print in both directions. This provides the fastest printing. If vertical lines are not aligned, calibrate your printer as shown in Chapter 1.

When Auto is selected, the printer switches automatically between bidirectional (for text data) and unidirectional (for graphics data).

Network interface mode

If your printer is connected to a single computer, leave this feature off. If you want to use the printer in a network and share it among multiple computers, set this feature to on.

When this feature is set to on, data may be present in the printer's buffer even though the printer is not printing. Always make sure the Data light is off before turning off the printer.

Auto line feed

When the auto line feed feature is on, each carriage return (CR) code is accompanied by a line feed (LF) code. If your printed text is unexpectedly double-spaced, set this feature to off. If text lines print on top of each other, set it to on.

Loading position

When you want to print more lines on a page, set this feature to 3 mm. If you set the top margin with your software, that setting is added to the default-setting value.

Interface mode

The interface mode specifies which interface port can receive print data.

The EPSON Stylus COLOR has a parallel interface port and an RS-422 serial port. You can also install an optional interface card, including an RS-232C serial interface card or an additional parallel interface. See Chapter 7 for more information about optional interface cards.

Note:
The RS-422 serial port is standard for the Apple Macintosh but is not often used for PCs.

By default, interface mode is selected for automatic selection so the printer can automatically select the interface that is receiving data. This allows you to connect the printer to more than one computer without having to specify the interface port.

If you wish, you can set the interface mode for a specific interface. However, the printer will not detect print data that is received over a different interface.

Auto interface wait mode

When you select Auto I/F mode in the Interface mode option, you can set the interface timeout to 10 seconds or 30 seconds.

The printer does not accept data from another interface unless it receives no data from the current interface for the period set in I/F timeout.

Character table

Character tables contain the characters and symbols used by different languages. The printer prints text based on the selected character table. For the available character tables, see Appendix B. To change the character table, see the next section, "Changing the default settings."

Changing the default settings

To change the printer's default settings, you use the control panel buttons; the control panel lights show your selections.

1. Make sure the printer is turned off and paper is loaded in the sheet feeder.

2. Hold down the Economy/Condensed button and turn on the printer to enter the default-setting mode.

   The printer loads a sheet of paper and prints a brief summary and instructions. It instructs you to select the language that you want messages printed in (English, French, German, Italian, or Spanish).

3. Press the Font button until the Font lights indicate the language of your choice; then press the Alt button to make your selection.

Language	**Font**
English	Courier
French	Roman T (PS)
German	Sans Serif H (PS)
Italian	Roman
Spanish	Sans Serif

After you press the Alt button, the printer prints the current default settings and the next instruction in the language you selected.

4. To move to the feature you want to change, press the Font button until the Courier, Roman T (PS), and Sans Serif H (PS) lights indicate the appropriate selection.

Default-setting menu	Courier light	Roman T (PS) light	Sans Serif H (PS) light
Print direction	N	0	0
Network interface mode	0	N	0
Auto line feed	N	N	0
Loading position	0	0	N
Interface mode	O	0	N
Auto interface	0	N	N
Character table	N	O	O

On N Off 0

For example, if you want to change the loading position setting, press the Font button until the Courier and Roman T (PS) lights are off and the Sans Serif H (PS) light is on.

5. Then after the font lights indicate your selection, press the Alt button until the Operate, Data, and Paper Out lights match your desired setting as shown in the tables below and on the next page.

Default-setting menu	Settings	Operate light	Data light	Paper out light
Print direction	Auto	N	0	0
	Bi-d	0	N	0
	Uni-d	N	N	0
Network interface mode	Off	0	0	0
	On	N	0	0
Auto line feed	Off	0	0	0
	On	N	0	0
Loading position	3 mm	0	0	0
	8.5 mm	N	0	0
Interface mode	Auto interface mode	N	0	0
	Parallel interface	0	N	0
	Serial interface	N	N	0
	Option interface	0	0	N
Auto interface wait mode	10 seconds	0	0	0
	30 seconds	N	0	0

On N Off 0

Character table setting table

Character table	Operate light	Data light	Paper out light
Italic U.S.A	0	0	0
Italic France	N	0	0
Italic Germany	F	0	0
Italic U.K.	0	N	0
Italic Denmark	N	N	0
Italic Sweden	F	N	0
Italic Italy	0	F	0
Italic Spain 1	N	F	0
PC 437	F	F	0
PC 850	0	0	N
PC 860	N	0	N
PC 863	F	0	N
PC 865	0	N	N
PC 861	N	N	N
BRASCII	F	N	N
Abicomp	0	F	N

On N Off 0 Flashing F

6. Repeat steps 4 and 5 to change as many default settings as desired.

7. Exit the default-setting mode by turning off the printer.

Note:
You may exit the default-setting mode any time by turning off the printer. Any changes you have made remain in effect until you change them again.

Chapter 5

Maintenance

5

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Transporting the Printer 5-8

Replacing an Ink Cartridge

When the printed image is faint, has many gaps, or nothing prints, either wait until the document finishes printing or press the Pause button and then the Load/Eject button to eject the page. Then clean one or both of the print heads. If three cleanings do not improve print quality, replace one or both ink cartridges.

If the colors you print are very different from what you expect, print a self test as described in Chapter 1. If one or more of the colors do not appear in the self test, replace one or both ink cartridges.

Use these EPSON ink cartridges or cartridges manufactured to EPSON's specifications only:

Black ink cartridge	S020034
Color ink cartridge	S020036

When you need new ink cartridges, contact your dealer or call EPSON Accessories at (800) 873-7766.

1. Make sure the printer is on.

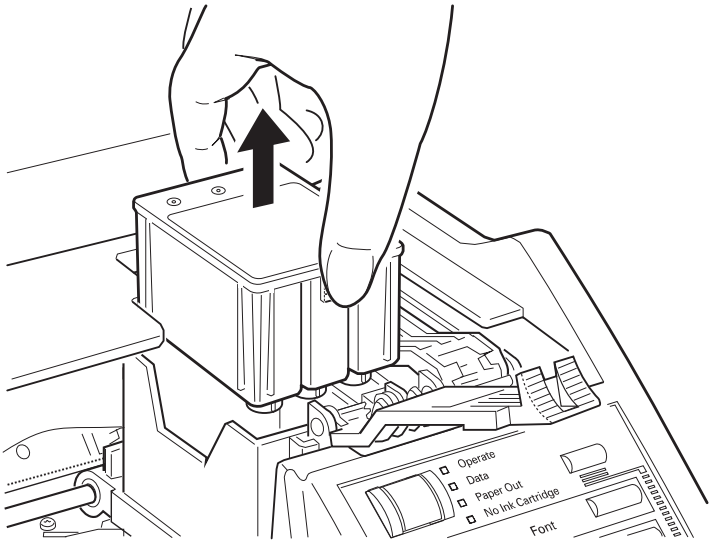
2. Open the printer cover.

3. Press the Pause button to turn the Pause light on.

4. Hold down the Alt button for about five seconds until the print head moves slightly left to the ink cartridge install position. The Pause light begins blinking.

5. Lift the cartridge lever up as far as it will go. The cartridge rises partly out of the carriage.

6. Lift the cartridge out of the printer and dispose of it properly. Do not take the used cartridge apart or try to refill it.



C

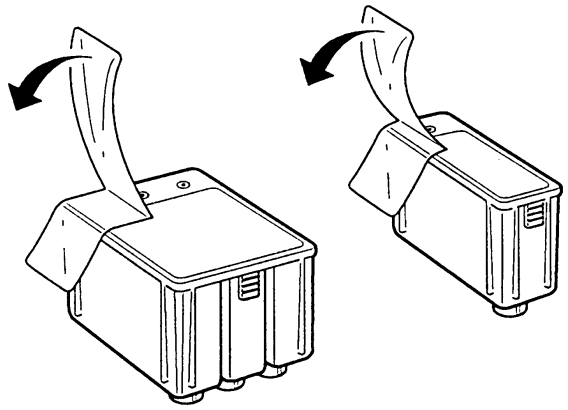
Caution:

- *If ink gets on your hands, wash them thoroughly with soap and water. If ink gets into your eyes, flush them immediately with water.*
- *Leave the old cartridge installed in the printer until you are ready to replace it with a new one. Attempting to print without a cartridge installed can damage the printer.*
- *Never use a refilled or reassembled cartridge. If you use substandard products with your EPSON printer, you will damage the print heads and void your warranty.*

Note:

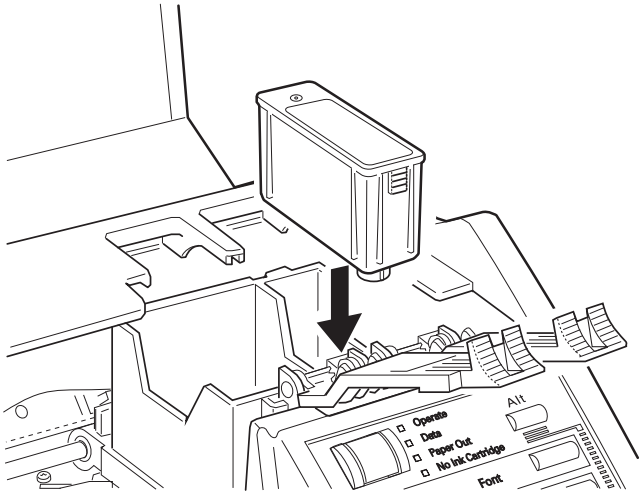
- *When replacing the ink cartridge, make sure no paper is in the paper path. Paper loaded in the printer is ejected automatically when you replace the cartridge.*
- *The carriage returns to the home position after 60 seconds if the ink cartridges are not removed.*

7. Open the package containing the ink cartridge and remove the cartridges from their protective cardboard. Remove the tape seal from the cartridge. (Your packaging may differ slightly from that shown below.)

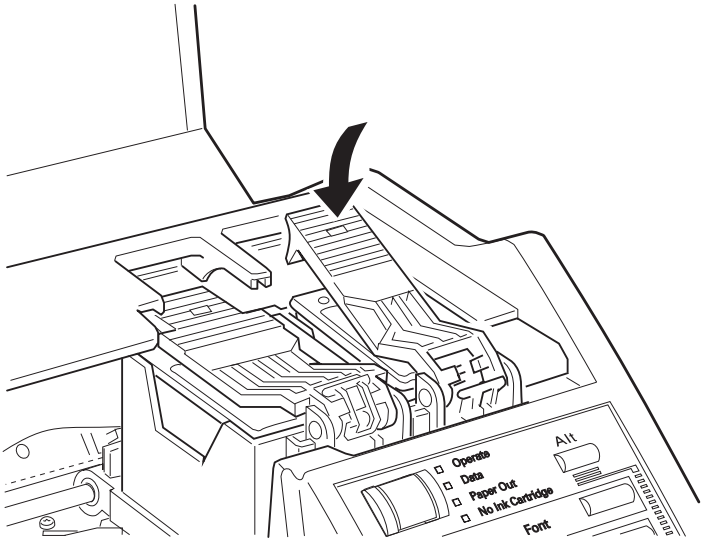


C ***Caution:***
You must remove the tape seal from the cartridge. Leaving the tape on when you install the cartridge will permanently damage it.

8. Lower the ink cartridge into the cartridge holder with the label on the cartridge face up and the arrow on the cartridge pointing to the rear of the printer. The larger (color) cartridge goes on the left, the black ink cartridge on the right.



9. Push the ink cartridge clamp toward the back of the printer until it locks in place. The Pause light begins flashing.



10. Press the Alt button again. The printer mechanism moves while the Pause light continues to flash.

C ***Caution:***
Never turn off the printer while the Pause light is flashing.

11. When the Pause light quits flashing and stays on, press the Pause button and close the printer cover.

Note:
If you have print quality problems after you replace the cartridge, try cleaning the print heads as described in Chapter 5.

Cleaning the Print Heads

If print quality diminishes, use the printer's built-in print head cleaning cycle to enable the nozzles to deliver ink properly. You can clean the color and black print heads separately.

To avoid wasting ink, clean the print head only if print quality declines.

1. Make sure the printer is turned on and press the Pause button.

   Note:
   When cleaning a print head, make sure no paper is in the paper path. Paper loaded in the printer is ejected automatically when you clean a print head.

2. Hold down the Alt button and press Economy/Condensed to clean the color print head.

   Hold down the Alt button and press Load/Eject to clean the black print head.

   Note:
   - *The cleaning cycle takes about one minute. The Pause light flashes throughout the cycle and then stays on when the cleaning cycle is finished.*
   - *You cannot perform both color and black print head cleaning operations at the same time.*

3. Press the Pause button to resume printing.

   Note:
   If the print quality does not improve after you perform cleaning three times, replace the ink cartridge following the steps shown earlier in this chapter.

Cleaning the Printer

To keep your printer operating at its best, you should clean it thoroughly several times a year.

1. Make sure the printer is turned off. Then unplug the power cord.

2. Remove any paper from the sheet feeder.

3. Use a soft brush to carefully brush away all dust and dirt.

4. If the outer case or the inside of the sheet feeder is dirty, clean it with a soft, clean cloth dampened with mild detergent. Keep the printer cover closed to prevent water from getting inside.

5. If the inside of the printer accidentally gets soiled with ink, wipe it off with a damp cloth.

C

Caution:

- *Never use alcohols or thinners to clean the printer; these chemicals can damage the components as well as the case.*
- *Be careful not to get water on the printer mechanism or electronic components.*
- *Do not use a hard or abrasive brush.*
- *Do not spray the inside of the printer with lubricants; unsuitable oils can damage the mechanism. Contact your dealer or a qualified service person if lubrication is needed.*

Transporting the Printer

If you need to transport your printer some distance, carefully repack it using the original box and packing materials as follows:

1. Open the printer cover and make sure that the print head is capped in the far right position. If the print head is not capped, turn on the printer to cap it. Then turn off the printer.

   C ***Caution:***
   Transporting the printer without the cartridges installed can damage the printer.

2. Unplug the power cord from the electrical outlet; then disconnect the interface cable from the printer.

3. Remove the paper from the sheet feeder.

4. Attach the protective material to the printer. See the Notice Sheet that came in the box.

5. Repack the printer in the original box.

6. Keep the printer flat in the box during transport.

If the printed image is faint, has gaps, or nothing prints when you first use the printer after transport, clean the print heads. See "Cleaning the Print Heads" earlier in this chapter. If the printed image is misaligned, calibrate the printer as described in Chapter 1, "Setting Up."

Chapter 6

Troubleshooting

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Print Quality Problems 6-2

Problems with Printing 6-5

Paper Handling Problems 6-8
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- Paper feeding problems 6-9

6

Problems With Printing

This chapter describes what you can do if you are having problems printing. It is divided into the following sections:

- ❑ Print quality problems. See this section if the print quality is not good or not what you expect.
- ❑ Problems with printing. See this section if your printer is not printing.
- ❑ Paper handling problems. See this section if you have paper jams or other problems with paper feeding incorrectly.

If you have a printing problem, check the appropriate section and follow all suggestions that apply to your problem. If none of the suggested solutions solve your problem, call the EPSON Connection at (800) 922-8911. (Canadian users can call (800) GO-EPSON.)

Print Quality Problems

Print quality problems can often be solved by cleaning the print heads as described in Chapter 5. Note that it may take as many as three cleaning cycles to solve a print quality problem. If cleaning the print heads does not improve the print quality, try the following:

- ❑ Check whether the ink cartridges are empty. Print a self test as described in Chapter 1. After the first page prints, the printer prints an entire page of text lines in various colors, including black, magenta, cyan, and yellow. If the black lines don't print, replace the black ink cartridge; if the magenta, cyan, or yellow lines don't print, change the color ink cartridge.

- ❑ For color or complex grayscale images, turn on MicroWeave and turn off High Speed.
- ❑ Use a higher-quality paper.
- ❑ For monochrome printing, check that Monochrome is selected.
- ❑ Make sure the Media Type setting matches the type of paper loaded in the printer.

Other problems may be caused by an incorrect driver setting. If you're printing a scanned image, check the scanner software settings.

If print quality does not improve, see the following specific items.

Printed output is not what you expect or is faint or blurred.

Clean one or both print heads as described in Chapter 5.

Replace one or both ink cartridges.

Make sure MicroWeave is on and High Speed is off.

Use a higher quality paper. Also, check that the Media Type setting in the driver is selected for the type of paper loaded. If you are using 720-dpi resolution, be sure to load special coated 720-dpi paper or High Quality Glossy paper. Always use this special paper when printing at 720 dpi.

Check that the paper thickness lever is set correctly for the type of paper. (See "Loading envelopes" in Chapter 2 for more information.) Faint printouts can result if you print on plain paper when the paper thickness lever is set for thick paper.

Check whether your paper is moist or damp. Ink jet printers are sensitive to moisture absorbed by paper. Do not store paper in damp or humid places.

Check whether economy printing mode is on. To turn off this mode, press the Economy/Condensed button until the Economy light goes off.

You might not be printing on the right side of the paper. Flip the paper so the side that was face down is up and reload it.

Your video driver might not be compatible with the printer. Use the standard Windows VGA driver or contact the manufacturer of your video card for an updated driver. For information on changing the video driver, see your Windows documentation.

Set the Network Interface Mode to on in the printer's default settings mode. See "Using the Default-Setting Mode" in Chapter 4.

Vertical lines do not align or you see white banding.

Calibrate your printer as described in Chapter 1.

The font selected on the control panel does not print.

Software settings override the control panel settings. Use the font settings in your software.

Printing starts too high or too low on the page, or the page length is not what you expect.

Use your software program to adjust the top and bottom margins. Change the number of lines per page in your software.

The page length setting may not match the length of the paper loaded in the printer. Change the page length setting within your software to match the paper you are using.

Hex dump mode

Experienced users can use hex dump mode to pinpoint communication problems between the printer and a software program. To turn on hex dump mode, hold down the Load/Eject and Font buttons and turn on the printer. Then send a print job. The printer prints the exact codes it receives from the computer in hexadecimal format.

Problems with Printing

If you cannot get the printer to print, first check that paper is loaded in the printer. Then check that the printer is plugged into a working electrical outlet that is not controlled by a switch or timer. Verify that the interface cable is securely connected to the printer and computer.

If the problem is not with the power cord or interface cable, print a self test as described in Chapter 1. If the self test does not print, the problem is with the printer. If the self-test prints correctly, the problem probably lies with your software.

After you perform the self test, see the following specific problems.

The Data light is on and the Stylus COLOR window appears on screen, but you cannot print.

There may be a conflict between the printer and your computer. To resolve the problem, do the following:

1. In the Program Manager, double-click the Main program group to open it.

2. Double-click the File Manager icon.

3. Use the File Manager to open the System directory in the Windows directory.

4. Locate and double-click the EPSPLMGR.EXE file.

5. Double-click the entry for the Stylus COLOR. This brings up the Queue Setup dialog box.

6. Select the Use Print Manager for this Port checkbox.

7. Choose OK.

8. Exit the dialog box. Then exit the File Manager.

Printing has stopped and the Pause light is on.

Printing is temporarily suspended. Press the Pause button to continue.

Printing has stopped but the Pause light is off.

One or both ink cartridges may be empty or too old. A cartridge is too old if it has been used longer than six months or beyond the date on its packaging. First clean the print heads as described in Chapter 5. If this does not solve the problem, replace the ink cartridges.

The interface cable might not meet the specifications for the printer or computer.

The No Ink Cartridge light is on, and the printer does not print.

One or both ink cartridges are not installed. Install both ink cartridges.

The printer makes a grinding noise and does not feed paper.

Something is pressing against the knob on the printer's right side. Turn off the printer and reposition it, leaving approximately 2 inches of open area next to the printer's right side. The printer will not work if anything is pressing against the knob.

All lights except the Operate light flash and nothing prints.

Contact your dealer or EPSON.

Printing stops and the Data and Pause lights flash.

There is a problem with the carriage. Turn off the printer. After a few seconds, turn it back on and try printing again. If the error is not cleared, contact your dealer or a qualified service person.

The printer sounds like it is printing, but nothing prints.

The print heads may need cleaning. See Chapter 5 for instructions.

One or both ink cartridges are empty or too old. A cartridge is too old if it has been used longer than six months or beyond the date on its packaging. First clean the print heads as described in Chapter 5. If this does not solve the problem, replace the ink cartridges.

Ink cartridges do not last as long as expected.

The ink cartridge life varies, based on the amount of ink used in printing and how often you clean the print heads. If you often print pages with large graphics and dense text with little white space, you will use up cartridges faster than if you print pages with lots of white space.

Paper Handling Problems

This section describes how to clear paper jams inside your printer and how to ensure that paper feeds properly.

Clearing and preventing paper jams

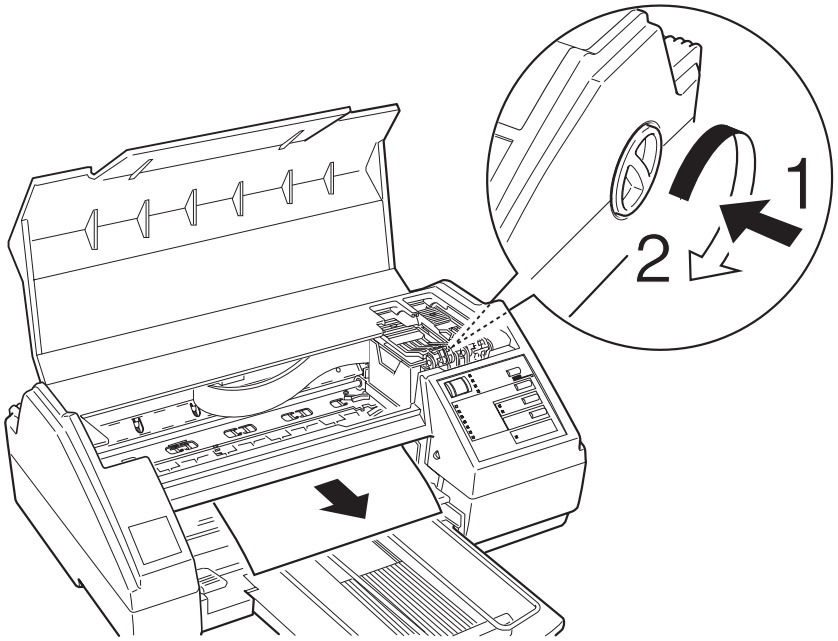
If paper has jammed inside the printer, clear the paper as follows:

1. Turn off the printer.

2. Open the printer cover.

3. Rotate the knob on the right side of the printer while pushing it in as shown below.

   Do not feed paper backward. If you do, ink from the printed sheet can come off onto the printer and smear other sheets.



4. Pull the paper out carefully. If it tears, make sure you remove any remaining pieces.

5. If paper is caught in the paper eject area, gently pull it out of the printer.

6. Close the printer cover.

7. Turn on the printer to move the print heads to the correct positions.

8. Adjust the left and rear paper edge guides on the paper support.

If you have frequent paper jams, try the following corrective measures.

- ❑ Use a higher-quality paper, one that is not too thin or rough. Make sure it is suitable for ink jet printers. Also, some types of paper should be fed one sheet at a time. See Chapter 2 more information about loading paper.

- ❑ Fan the stack of paper before you load it.

- ❑ Do not load too many sheets in the sheet feeder. You can load up to 100 sheets of plain paper, 70 sheets of special coated paper, or 50 sheets of transparency film or High Quality Glossy paper.

Paper feeding problems

If paper is not feeding properly, the most likely causes are the following:

- ❑ Paper is curled or folded. Use flat, nondamaged paper.

- ❑ Too many sheets are loaded in the paper feeder. Do not load more than 100 plain paper sheets or more than 70 special coated sheets.

- ❑ The paper is too thin or thick. For specifications, see Appendix A.

- ❑ The edge guides are too tight or too loose. Adjust the edge guides for the size of the paper.

If you still have paper feeding problems, see the following:

The printer loads more than one sheet at a time.

The paper is too thin or thick. For specifications, see Appendix A.

Ejected paper is wrinkled.

The paper is too thin or damp. Do not store paper in damp or humid places.

Single-sheet paper does not fully eject.

Use the Load/Eject button to eject the page.

The paper is too long. Use paper that is within the specified size. See Appendix A for exact size specifications.

Paper is feeding crooked.

The paper is old or creased. Use only new, smooth sheets of paper.

Too much paper is on the paper support. Remove a few sheets.

The paper is not the proper size and quality. See Appendix A for exact specifications.

Chapter 7

Using Optional Interfaces

Optional Interfaces 7-2
Installing optional interfaces 7-2

7

Optional Interfaces

You can use various interface cards to supplement the capabilities of your printer's built-in hardware interfaces. The following EPSON interface cards are compatible with your printer:

Interface card	Model number
Serial Interface Card	C823051
32KB Serial Interface Card	C823071
32KB Parallel Interface Card	C823101
Twinax Interface Card	C823151
Coax Interface Card	C823141

If you are not sure whether you need an optional interface or if you want to know more about interfaces, contact your dealer.

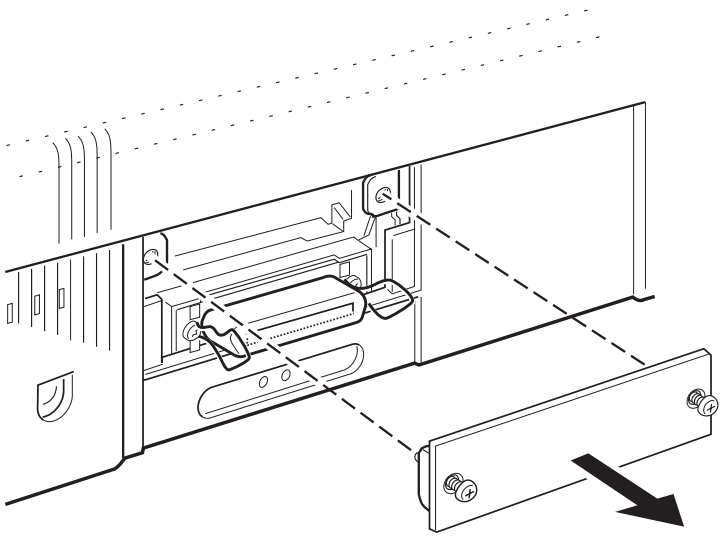
Installing optional interfaces

1. Turn off the printer.
2. Unplug the power cord from the electrical outlet.

> ***Warning:***
> *Do not install or remove an interface card when the printer is connected to the electrical outlet. If you do, you may damage your printer or computer.*

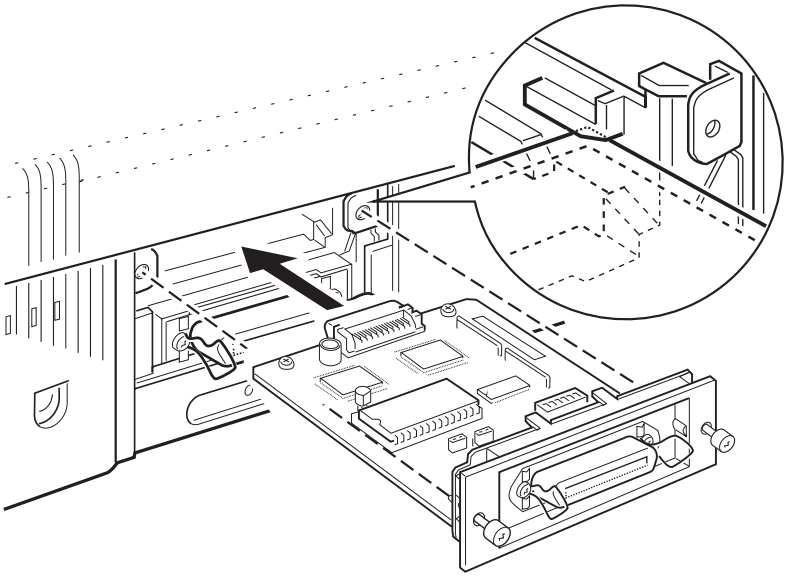
3. Turn the printer around so that its back faces you and disconnect any interface cables.

4. Use a cross-head screwdriver to remove the two screws securing the shield plate to the optional interface slot; then lift off the plate.



5. Be sure to set any switches and jumpers on the card. See the interface card manual for details. If your interface card has a jumper named JG, make sure that you set it to on, or the card will not work properly.

6. Slide the interface card along the slots on both sides of the interface compartment. Push it in firmly to fully insert the connector at the rear of the interface card into the printer's internal socket.



7. Secure the interface card in the slot with the two screws included with the interface card.

8. Connect the proper interface cable to the interface card and to your computer.

   Also, connect other interface cables if you are using more than one computer.

9. Make sure the printer is turned off. Then plug in the power cord.

Before you use the optional interface, you may need to change the settings for the interface option in the default-setting mode. See Chapter 4.

To remove the interface card, follow the above steps in reverse order.

The C823051 and C823071 serial interface cards

To use the C823051 or C823071 interface card, see the sections below to set the correct baud rate, handshake timing, and error handling.

For all other data transfer conventions, such as word structure and communications protocol, see the C823051 or C823071 interface card manual.

Selecting the baud rate

You can select from the following baud rates: 300, 600, 1200, 2400, 4800, 9600, and 19200 bps (bits per second). To set the baud rate, see the bit-rate selection table in the C823051 or C823071 interface card manual.

Handshake timing

When the vacant area for data in the input buffer drops to 256 bytes, the printer outputs an X-OFF code or sets the DTR flag to 1 (MARK) to indicate that it cannot receive data. When the vacant area for data in the buffer increases to 512 bytes, the printer outputs an X-ON code or sets the DTR flag to 0 (SPACE) to indicate that it is ready to receive data.

Error handling

When the printer detects a parity error, it prints an asterisk (*). The printer ignores all other errors, including framing and overrun errors.

Appendix A

Specifications

General Specifications A-2
- Printing A-2
- Paper A-4
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- Electrical A-8
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- Safety approvals A-9

Interface Specifications A-9
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Default Settings A-14

A

General Specifications

Printing

Printing method: On-demand ink jet

Nozzle configuration: Monochrome (black) 64 nozzles (16 × 4 staggered)
Color 48 nozzles (16 × 3, Cyan, Magenta, Yellow)

Printable columns and print speed (black):

Character pitch (characters per inch)	Printable columns	Printing speed* (characters per second)
10	80	200
12	96	240
15	120	300
17 (10 condensed)	137	340
20 (12 condensed)	160	400

* Print speeds vary depending on system configuration, software application, and amount of page covered.

Print speed (color)*:

Highest quality (MicroWeave on): 5.5 MPP (minutes per page)

High quality and high speed: 3 MPP

* Print speeds vary depending on system configuration, software application, and amount of page covered.

Resolution: 180 × 180 dpi, 360 × 360 dpi, or 720 × 720 dpi, switchable using printer driver settings

Print direction: Bidirectional with logic-seeking for text and graphics. (Auto-print direction can be set in the default-setting mode.)

Control code: ESC/P 2 color

Line spacing: 1/6 inch, 1/8 inch, or programmable in 1/360-inch increments

Paper feed speed: 89 milliseconds per 1/6-inch line

Input buffer: 64KB

Bitmap fonts:

Font	10 cpi	12 cpi	15 cpi	Proportional
EPSON Roman	N	N	N	N
EPSON Sans Serif	N	N	N	N
EPSON Courier	N	N	N	—
EPSON Prestige	N	N	N	—
EPSON Script	N	N	N	—

Select other font/pitch combinations using ESC/P 2 commands. See the Command List in Appendix B.

Scalable fonts:

Font	Min pt	Max pt	Increments
EPSON Roman	8	32	2 pt
EPSON Sans Serif	8	32	2 pt
EPSON Roman T	8	32	2 pt
EPSON Sans Serif H	8	32	2 pt

Character tables: 1 italic and 8 graphics character tables

Character sets: 14 international character sets and 1 legal character set

Paper

Note:
Since the quality of any particular brand or type of paper may be changed by the manufacturer at any time, EPSON cannot guarantee the use of any particular brand or type of paper. Always test samples of paper stock before purchasing large quantities or printing large jobs.

Paper path:	Sheet feeder, front entry
Single sheets:	
ASF (automatic sheet feeder) capacity	100 sheets at 64 g/m^2 (17 lb) paper 10 envelopes 50 transparency films 70 sheets of EPSON Special coated paper
Size	A4 (210 mm × 297 mm) Letter (8.5 × 11 inches) Legal (8.5 × 14 inches) A5 (148 mm × 210 mm) B5 (182 mm × 257 mm) Executive (7.5 × 10 inches)
Paper types	Plain paper and special papers distributed by EPSON (special coated paper and transparencies)
Paper thickness	0.08 to 0.11 mm (0.003 to 0.004 inches)
Paper weight	64 to 90 g/m^2 (17 to 24 lb) ❑ Use 90 g/m^2 (24 lb) paper under normal temperature and humidity conditions.
Envelopes:	
ASF capacity	10 envelopes
Size	No. 6 166 × 92 mm (6.5 × 3.6 inches) No. 10 240 × 104 mm (9.5 × 4.1 inches) DL 220 mm × 110 mm (8.7 × 4.3 inches) C5 162 mm × 229 mm
Paper types	Bond paper
Paper thickness	Less than 0.52 mm (0.020 inches)
Paper weight	75 to 90 g/m^2 (20 to 24 lb)

Note:

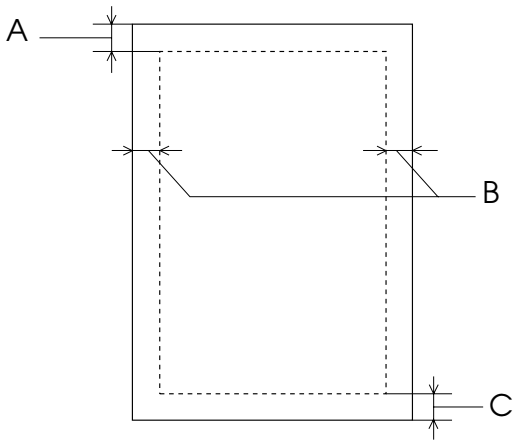
- ❑ *Use recycled paper under normal temperature and humidity conditions only. Poor quality paper may reduce print quality and cause paper jams and other problems. If you encounter problems, switch to a higher grade of paper.*
- ❑ *Envelope and transparency printing are available only under normal conditions:*

Temperature	*15 to 25°C (59 to 77°F)*
Humidity	*40 to 60% RH*

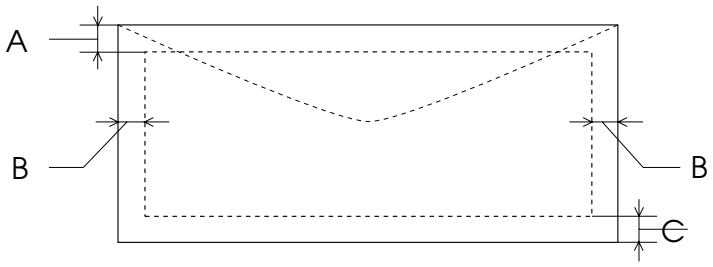
- ❑ *Use envelopes that do not curl.*
- ❑ *The following EPSON genuine papers are available:*
  S041025 Special coated paper for 360 dpi printing (A4)
  S041028 Special coated paper for 360 dpi printing (Letter)
  S041026 Special coated paper for 720 dpi printing (A4)
  S041029 Special coated paper for 720 dpi printing (Letter)
  S041027 Transparency film (A4)
  S041030 Transparency film (Letter)
  S041032 Starter Pack (samples of 360, 720, and transparency film special media)

Printable area:

Single sheets



Envelopes



A The minimum top margin is 3.0 mm (0.12 inches).
B The minimum left margin is 3.0 mm (0.12 inches).
The right margin is:
3.8 mm (0.15 inches) for A4, B5 size paper, and No. 6 envelope.
9.8 mm (0.38 inches) for Letter and Legal size paper.
13.8 mm (0.54 inches) for DL envelope.
33.8 mm (1.33 inches) for No.10 envelope.
C The minimum bottom margin is 13.0 mm (0.51 inches).

Ink cartridges

Black ink cartridge (S020034):

Color	Black
Print capacity*	Approximately 1.5 million characters (840 sheets, A4, 5% duty at 360 dpi)
Cartridge life*	2 years from production date and within 6 months after opening the package, at 25°C (77°F)
Temperature	Storage: –30 to 40°C (–22 to 104°F) 1 month at 40°C (104°F) Transit: –30 to 60°C (–22 to 140°F) 1 month at 40°C (104°F) 120 hours at 60°C (140°F) Freezing:** –4°C (24.8°F)
Dimensions	26.9 mm (W) × 67.4 mm (D) × 41.8 mm (H)

Color ink cartridge (S020036):

Colors	Cyan, Magenta, and Yellow
Print capacity*	In each color, approximately 1.2 million characters (670 sheets/color, A4, 5% duty at 360 dpi)
Cartridge life*	2 years from production date and within 6 months of opening the package at 25°C (77°F)
Temperature	Storage: –30 to 40°C (–22 to 104°F) 1 month at 40°C (104°F) Transit: –30 to 60°C (–22 to 140°F) 1 month at 40°C (104°F) 120 hours at 60°C (140°F) Freezing:** –6°C (21.2°F)
Dimensions	54.0 mm (W) × 67.4 mm (D) × 41.8 mm (H)

* The cartridge life may vary, depending on how often you use the print head cleaning function.

** The ink freezes at –4°C (24.8°F) for black ink and –6°C (21.2°F) for color ink. It thaws in approximately 2 hours at 25°C (77°F).

C ***Caution:***

- ❑ *The printer will be damaged if you use ink or cartridges not manufactured by EPSON or to EPSON's specifications. Do not attempt to refill ink cartridges manually. If you use substandard products with your EPSON printer, you will damage the print heads and void your warranty.*
- ❑ *Do not use an ink cartridge if the date on the package has expired.*

Mechanical

Paper feed method:	Friction
MTBF:	4,000 power-on hours
Print head life:	1,000 million dots per nozzle
Total print volume:	75,000 pages
Dimensions and weight:	Printing Width 470 mm (18.5 inches) Depth 525 mm (20.7 inches) Height 192 mm (7.56 inches) No paper Width 470 mm (18.5 inches) Depth 344 mm (13.5 inches) Height 294 mm (11.6 inches)
Weight:	7.4 kg (15.9 pounds) including the ink cartridges

Electrical

	120 V model	**220-240 V model**
Input voltage range	103.5 to 132 V	198 to 264 V
Rated frequency range	50 to 60 Hz	50 to 60 Hz
Input frequency range	49.5 to 60.5 Hz	49.5 to 60.5 Hz
Rated current	0.6 A	0.4 A
Power consumption	Approx. 20 W (during self-test printing at 10 cpi)	Approx. 20 W (during self-test printing at 10 cpi)

Note:
Check the label on the back of the printer for the voltage of your printer.

Environmental

Temperature:	Operation	10 to 35°C (50 to 95°F)
	Storage*	–20 to 60°C (14 to 140°F) 1 month at 40°C (104°F) 120 hours at 60°C (140°F)
Humidity:	Operation	20 to 80% RH
	Storage* **	5 to 85% RH

* Stored in shipping container

** Without condensation

Safety approvals

Safety standards:	UL 1950 with D3, CSA 22.2 950 with D3
R.F.I.:	FCC part 15 subpart B class B

Interface Specifications

Your printer is equipped with an 8-bit parallel interface and a serial interface.

Parallel interface

The built-in parallel interface has the following characteristics:

Data format:	8-bit parallel
Synchronization:	$\overline{\text{STROBE}}$ pulse
Handshake timing:	BUSY and $\overline{\text{ACKNLG}}$ signals
Signal level:	TTL compatible
Connector:	36-pin 57-30360 Amphenol connector or equivalent

Pin assignments

The parallel interface connector pin assignments and a description of the interface signals are shown in the table below.

Signal Pin	Return Pin	Signal	Direction	Description
1	19	$\overline{\text{STROBE}}$	IN	$\overline{\text{STROBE}}$ pulse to read data.
2 3 4 5 6 7 8 9	20 21 22 23 24 25 26 27	DATA 1 DATA 2 DATA 3 DATA 4 DATA 5 DATA 6 DATA 7 DATA 8	IN IN IN IN IN IN IN IN	These signals represent information in bits 0 to 7 of parallel data respectively. Each signal is at HIGH level when data is logical 1 and LOW when it is logical 0.
10	28	$\overline{\text{ACKNLG}}$	OUT	About a 5-µs pulse. LOW indicates data has been received and the printer is ready to accept more data.
11	29	BUSY	OUT	A HIGH signal indicates the printer cannot receive data. The signal goes HIGH in the following cases: 1) During data entry (for each character) 2) During initialization 3) During self test, demonstration, and default-setting printing 4) During a printer-error state
12	30	PE	OUT	A HIGH signal indicates the printer is in a paper-out state or in an error state.
13	-	SLCT	OUT	Pulled up to +5 V through 1 kΩ resistance
14	-	$\overline{\text{AUTO}}$ $\overline{\text{FEED}}$ $\overline{\text{XT}}$	IN	When this signal is LOW, the paper is automatically fed one line after printing.
15	-	NC	-	Not used
16	-	GND	-	Logic ground level

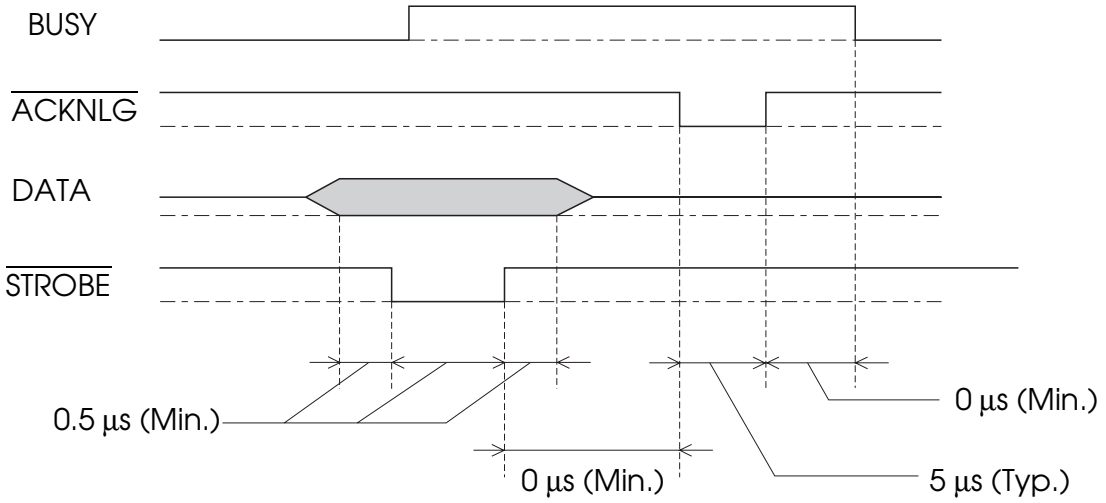
Signal Pin	Return Pin	Signal	Direction	Description
17	-	CHASSIS GND	-	Printer's chassis ground, which is connected to the logic ground.
18	-	NC	-	Not used
19-30	-	GND	-	Twisted-pair return signal ground level
31	16	$\overline{\text{INIT}}$	IN	When this signal goes LOW, the printer controller is reset to its state when the power is first turned on and the print buffer is cleared. This level is normally HIGH; its pulse width must be more than 50 μs at the receiving terminal.
32	-	$\overline{\text{ERROR}}$	OUT	This signal level goes LOW when the printer: 1) Is out of paper 2) Is in an error state 3) Has no ink cartridges installed
33	-	GND	-	Same as for Pins 19-30
34	-	NC	-	Not used
35	-	+5 V	OUT	Pulled up to +5 V through 1 KΩ resistance
36	-	NC	-	Not used

Note:

- *The column heading "Direction" refers to the direction of signal flow as viewed from the printer.*
- *"Return" denotes the twisted-pair return to be connected at signal ground level. For the interface wiring, be sure to use a twisted-pair cable for each signal and to complete the connection on the return side.*
- *All interface conditions are based on TTL level. Both the rise and fall times of each signal must be less than 0.2 microseconds.*
- *Data transfer must be carried out by observing the $\overline{\text{ACKNLG}}$ or BUSY signal. Data transfer to this printer can be carried out only after receipt of the $\overline{\text{ACKNLG}}$ signal or when the level of the BUSY signal is LOW.*

Timing chart

The figure below shows the timing chart for the parallel interface.



Transition time (both the rise and the fall) of every signal must be less than 0.2 µs.

Serial interface

The printer's built-in serial interface is based on the RS-422 standard. This interface has the following characteristics:

Standard:	Based on RS-422
Synchronization:	Asynchronous
Bit rate:	57.6 Kbps
Handshaking:	DTR and XON/XOFF protocol
Word format:	
Data bit	8 bits
Parity bit	None
Start bit	1 bit
Stop bit	1 bit
Connector:	8-pin mini-circular connector

Optional interfaces

The available interfaces are listed in Chapter 7. Please refer to the specifications in the user's guide packed with the optional interface card.

Initialization

The printer can be initialized (returned to a fixed set of conditions) in these ways:

Hardware initialization	* The printer is turned on. * The printer receives an $\overline{\text{INIT}}$ signal from the parallel interface: pin 31 goes LOW.
Software initialization	* Software sends the ESC @ (initialize the printer) command. The last panel settings are kept.
Control panel initialization	* Hold down the Alt button and press the Pause button (buffer clear). The last panel settings are kept.

Each kind of initialization has slightly different effects. All three methods reset the font according to the default settings selected using the control panel. However, ESC @ does not initialize the printer mechanism, clear the input data buffer, or clear the user-defined character set. The control panel initialization does not initialize the printer mechanism or clear the user-defined character set.

Default Settings

The table below shows the default settings that take effect when the printer is initialized.

Item	Default setting
Top-of-form position	Current paper position
Page length	Single sheets: 65 lines for A4-size paper 61 lines for letter-size paper
Left and right margins	Cancelled
Line spacing	1/6-inch line spacing
Character pitch	Last font selected on control panel
Vertical tab position	Cleared
Horizontal tab positions	Every eight characters
Font selection	Last font selected on control panel
Special printing effects	Cancelled (except condensed and economy printing)
User-defined character set	Hardware/control panel initialization: cleared Software initialization: deselected only
Graphic mode assignment	ESC K = ESC * 0, ESC L = ESC * 1, ESC Y = ESC * 2, ESC Z = ESC * 3

In addition, hardware and control panel initialization erases any text in the data buffer.

Appendix B

Commands and Character Tables

B

Command List B-2

Character Tables B-3
International character sets B-7
Characters available with ESC (^ command: B-8

Command List

This printer works with the following ESC/P 2 commands. If you need more information about using printer commands, you can purchase the *ESC/P 2 Reference Manual* (ESCP2REF) from EPSON Accessories by calling (800) 873-7766. Use only the commands listed below:

General operation:
ESC @, ESC U 1/0, ESC EM R

Paper feeding
CR, FF, LF, ESC 0, ESC 2, ESC 3 n, ESC + n

Page format
ESC (c nn, ESC (C nn, ESC C n, ESC C 0 n, ESC N n, ESC O, ESC L n, ESC Q n

Print position motion
ESC $ n1 n2, ESC \ n1 n2, ESC (V nn, ESC (v nn, ESC D nn, HT, ESC B nn, VT, ESC J n

Font selection
ESC k n, ESC X nn, ESC P, ESC M, ESC g, ESC p 1/0, ESC x n, ESC 4, ESC 5, ESC E, ESC F, ESC ! n

Font enhancement
SI, DC2, SO, ESC W 1/0, DC4, ESC w 1/0, ESC G, ESC H, ESC S 0, ESC S 1, ESC T, ESC (- nn, ESC - 1/0, ESC q n

Spacing
ESC SP n, ESC (U nn, ESC c n1 n2

Character handling
ESC (t nn, ESC t n, ESC R n, ESC & nn, ESC : 0 n 0, ESC % n, ESC 6, ESC 7, ESC (^ nn

Bit image
ESC * nn

Graphics
ESC (G nn, ESC . nn

Color
ESC r n

MicroWeave
ESC c i

Character Tables

These character tables are selected with the default-setting mode or by using software commands.

All tables except the italic are the same as the PC437 table for hex codes 00 through 7F, so only the PC437 table is shown completely. The rest of the tables show only the characters for hex codes 80 through FF.

PC437 (U.S., Standard Europe)

PC850 (Multilingual)

PC860 (Portuguese)

PC861 (Icelandic)

PC863 (Canadian-French)

PC865 (Nordic) ***Abicomp***

BRASCII

No characters are available for hex code 15 in the italic character table.

International character sets

You can select one of the following international character sets with the default-setting mode or the ESC R command. For example, when you select “Italic France,” the characters in the “France” row on the table below are used in the italic character table.

The following eight international character sets can be selected with the default-setting mode or with the ESC R command.

The following seven additional sets can be selected only with the ESC R command.

Characters available with ESC (^ command:

To print the characters in the table below, use the ESC (^ command.

Glossary

The following definitions apply specifically to printers unless otherwise stated.

additive colors
Colors that are produced by adding together the varying intensities of three colors: red, green, and blue. See also *RGB*.

bidirectional printing
See *high speed printing*.

brightness
The lightness or darkness level of an image.

characters per inch (cpi)
A measure of the size of text characters, sometimes referred to as pitch.

character table
A collection of letters, numbers, and symbols that provides you with the characters used in a particular language.

CMYK
Cyan (blue-green), magenta, yellow, and black. These colored inks are used to create the subtractive system array of printed colors.

condensed printing
Printing in which the width of each character is approximately 60% of the width of standard characters. Useful for fitting wide tables or spreadsheets onto the paper.

contrast
The amount of difference between the darkest and lightest colors in an image. The greater the difference, the higher the contrast value.

cpi
See *characters per inch.*

default
A value or setting that takes effect when the equipment is turned on, reset, or initialized.

diffused
A halftoning or dithering method where dot patterns are used to represent blended images in millions of colors. The printer driver has four diffused settings: pencil art, high speed, images, and complex diagrams.

dithering
See *halftoning*.

dpi
Dots per inch. The dpi measures the resolution. See also *resolution*.

driver
See *printer driver*.

economy printing
Printing in which images are printed with fewer dots to save ink.

ESC/P®
Abbreviation for EPSON Standard Code for Printers. See also *ESC/P 2*.

ESC/P 2
The enhanced version of the ESC/P printer command language. Commands in this language produce laser-like features, such as scalable fonts and enhanced graphics printing.

font
A style of type designated by a family name.

grayscale
A method of portraying color images in black and white.

halftoning
Methods of using tiny dot patterns to represent images.

hex dump
A troubleshooting feature that helps advanced users find the cause of communication problems between the printer and the computer. When the printer is in hex dump mode, it prints each code it receives in hexadecimal notation and ASCII characters. Also called data dump.

high speed printing
Images are printed in both directions for faster printing.

hue
The name of a color representing the color or its gradations.

initialization
Returns the printer to its defaults (fixed set of conditions).

ink color correction
A function of the driver that takes into account the characteristics of the Stylus COLOR printer when it determines the colors of ink used to print the text or image.

ink density correction
A function of the driver that takes into account the characteristics of the Stylus COLOR printer when it determines the amount of ink used to print the text or image.

ink jet
A method of printing in which each letter or symbol is formed by precisely spraying ink onto paper.

intensity
The relative strength caused by the amount of color. See also *saturation*.

interface
The connection between the computer and the printer. A parallel interface transmits data one character or code at a time.

media
Materials upon which data is printed such as envelopes, plain paper, special paper, and transparency film.

MicroWeave
Printing in which images are printed in finer increments to reduce the possibility of banding and to produce laser-like images.

parallel interface
See *interface*.

phosphor
The materials in your computer monitor that give off red, green, or blue light when radiated by the monitor's electron gun.

printable area
The area of a page on which the printer can print. It is smaller than the physical size of the page due to margins.

printer driver
A software program that sends commands for using the features of a particular printer.

resolution
The number of dots per inch used to represent an image. Your printer has three resolution settings: 180 × 180, 360 × 360, and 720 by 720.

RGB
Red, green, and blue. These colors, in phosphors radiated by the computer monitor's electron gun, are used to create the subtractive system array of screen colors.

saturation
The amount of ink used to represent the colors in an image. See also *intensity*.

scanned image
An image that is captured as software data by a scanning device.

software program
A computer language device that helps you carry out a particular task, such as word processing, financial planning, or image editing.

subtractive colors
Colors produced by pigments that absorb some colors of light and reflect others. See also *CMYK*.

unidirectional printing
Printing in which the print head prints in one direction only. Unidirectional printing is useful for printing graphics because it allows precise vertical alignment.

user-defined characters
Characters that are defined and stored in the printer by the user. Also called download characters.

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