

EPSON[®]
EPSON STYLUS[™] COLOR
400

User's Guide

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FCC Compliance Statement For United States Users

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

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

WARNING

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

For Canadian Users

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

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

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Introduction

Your EPSON Stylus® COLOR 400 printer prints up to 16 million colors, producing amazingly realistic photographic images and vivid computer graphic art. Its razor-sharp black printing also gives you laser-quality text, superb grayscale images, and detailed line art.

The printer software provides many automatic options and gives you control over the most subtle features of your image. It can even tailor its color correction scheme specifically for your image type, be it captured by digital video or still camera, imported from a photo CD, or created from a presentation graphics program.

You can also perform many printer maintenance procedures right from your computer, such as cleaning and aligning the print heads. And EPSON's extensive online help can guide you through printer operations in real time.

EPSON's specially formulated ink cartridges and wide variety of ink jet papers give you the best quality output and offer the most flexibility for getting the results you want. See page 2-1 for ordering information.

System Requirements

To use your printer and its driver, your system should have:

- ▶ An IBM® compatible PC with at least a 386/25 MHz or faster processor
- ▶ Windows® 3.1x, Windows for Workgroups 3.11, Windows 95, or Windows NT® 4.0
- ▶ At least 16MB of RAM (more for Windows 95)
- ▶ At least 20MB of free hard disk space for storing images (50MB or more is recommended)
- ▶ VGA, Super VGA, or better display adapter and monitor
- ▶ Double-speed CD-ROM drive (quad-speed or faster recommended) for installing the printer software
- ▶ A shielded, twisted-pair parallel cable (6 to 10 feet long) to connect your computer to the printer; the cable must have a D-SUB, 25-pin, male connector for your computer and a 36-pin, Centronics® compatible connector for the printer.

To use the EPSON Answers online guide (not available for Windows NT), you need at least a 486/33 processor. You also should have at least 20MB of free hard disk space for full program installation or at least 8MB of free hard disk space to run EPSON Answers from the CD.

For system requirements for the EPSON Perfect Picture™ Software Suite, see your *Setup Guide*.

How to Use Your Manual

To set up your printer and install your printer software, see the *Setup Guide* for instructions. This *User's Guide* contains the information you need to use your printer in these chapters:

Chapter 1, “Using the Printer Software,” explains how to use the printer driver, Spool Manager programs, and online Help.

Chapter 2, “Using Special Media,” gives guidelines for selecting the right paper or other media for your print job and instructions for loading it in your printer.

Chapter 3, “Using the Control Panel,” tells you how to use the printer’s control panel, run a printer check, and change the character table.

Chapter 4, “Maintenance and Transportation,” gives instructions for cleaning and aligning the print heads, replacing the ink cartridges, and cleaning and transporting the printer.

Chapter 5, “Troubleshooting,” provides solutions for any problems you may have.

Appendix, “Technical Specifications,” provides the technical details on your printer, ink cartridges, and EPSON media.

A **Glossary** and an **Index** are included at the end of the book.

Warnings, Cautions, Notes, and Tips

You'll find this information throughout your manual:



Warnings must be followed carefully to avoid bodily injury.



Cautions must be observed to avoid damage to your equipment.



Notes contain important information about your printer.



Tips contain additional hints for great printing.

Where To Get Help

EPSON provides customer support through the following services:

Electronic support services

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

Automated telephone services

Service	Access
EPSON SoundAdvice™	Pre-recorded answers to commonly asked questions about EPSON products 24 hours a day, seven days a week, call (800) 442-2110 .
EPSON FaxAdvice™	Access EPSON's technical information library by calling (800) 442-2110 . You must provide a return fax number to use this service.
EPSON Referral Service	For the location of your nearest Authorized EPSON Reseller or Customer Care Center, call (800) 442-2110 .



Note:

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

EPSON also provides technical support and information on the installation, configuration, and operation of EPSON products. Dial **(800) 922-8911**, **(310) 782-2600** (U.S.), or **(905) 709-9475** (Canada), 6 A.M. to 6 P.M., Pacific Time, Monday through Friday.

Before you call, please have the following information ready:

- ▶ Product name
- ▶ Product serial number
- ▶ Computer configuration
- ▶ Description of the problem

You can purchase ink cartridges, paper, manuals, accessories, and parts from EPSON Accessories at **(800) 873-7766** (U.S. sales only). In Canada, please call **(800) 873-7766** for dealer referral.



ENERGY STAR Compliance

As an ENERGY STAR Partner, EPSON has determined that this product meets the ENERGY STAR guidelines for energy efficiency. The EPA ENERGY STAR Office Equipment program is a voluntary partnership with the computer and office equipment industry to promote the introduction of

energy-efficient personal computers, monitors, printers, fax machines, and copiers in an effort to reduce air pollution caused by power generation.

Energy-saving Tips

Here are a few 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.
- Turn off your computer, printer, and monitor each day when you are done using them.
- Use the print preview option in your software so you can catch errors before you print something.
- Send e-mail rather than distributing memos. Not only is this faster, but you'll save paper and storage space too.

Important Safety Instructions

Before using your printer, read the following safety instructions to make sure you use the printer safely and effectively.

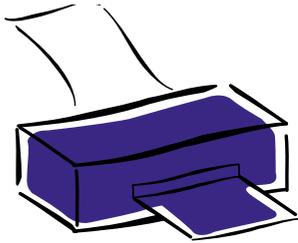
- Turn off and unplug the printer before cleaning. Clean with a damp cloth only. Do not spill liquid on the printer.
- Do not place the printer on an unstable surface or near a radiator or heating vent.
- Do not block or cover the openings in the printer's cabinet or insert objects through the slots.
- 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.

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

Placez l'imprimante près d'une prise de contact où la fiche peut être débranchée facilement.

- ▶ 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 ampere rating of all devices plugged into the wall outlet does not exceed the wall outlet's ampere rating.
- ▶ Except as specifically explained in this *User's Guide*, do not attempt to service the 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.



1

Basic Printing

The printer software includes the following programs:

- Printer driver, which lets you control printing and choose from a wide variety of settings to customize the appearance of your documents.
- EPSON Spool Manager, Despooler, and Status Monitor (Windows 95 only), which monitor your print job and let you control how it prints.
- EPSON Stylus COLOR 400 online help so you can look up more information on your software whenever you need it.

This chapter tells you how to access and use these printer software programs. See Chapter 4 for instructions on using the Nozzle Check, Head Cleaning, and Print Head Alignment utilities to perform printer maintenance procedures.

Accessing the Printer Driver

You can access the driver in different ways, depending on how you want the changes to be applied:

- To apply changes only to documents printed from your currently running Windows application, see the following section.
- To apply changes to documents printed from all Windows applications, access the driver as described on the next page for Windows 95, Windows 3.1, or Windows NT.



Note:

The settings you select through your Windows application apply only until you exit that application. Then the driver settings return to the default values selected through the Windows 95 Printer Properties or Windows 3.1 Control Panel (or the driver's defaults).

Accessing the Driver from Windows Applications

1. Choose Print or Print Setup from the File menu of your Windows application program.

If you choose Print, you first see a Print dialog box that contains the settings you change most often, including the number of copies and the pages you want printed.

2. To access the printer driver settings, choose the Printer, Setup, Properties, or Options button. (You may need to select another option, depending on your software program.)
3. In Windows 95 and Windows NT, click the Main tab; you see the Main menu, shown on page 1-3. In Windows 3.1, you see the Main menu when the driver opens.

Accessing the Driver from Windows 95

1. Double-click the My Computer icon.
2. Double-click the Printers folder.
3. Right-click the EPSON Stylus COLOR 400 icon (or double-click the icon and then pull down the Printer menu).
4. Select Properties.
5. Click the Main tab. You see the Main menu, shown on the next page.

Accessing the Driver from Windows 3.1

1. Double-click the Control Panel icon in the Main group.
2. Double-click the Printers icon.



Note:

The settings you select using Windows apply to all your Windows applications, unless you change them for a particular application session, as described above. Also some application settings override driver settings (such as Paper Size or Orientation), so it's a good idea to check the driver settings in your application too.

3. Choose EPSON Stylus COLOR 400 from the list of Installed Printers.
4. Choose Setup. You see the Main menu, shown below.



Note:
You can access the default Windows NT printer software settings only if you have the appropriate network access privileges, such as Administrator or Power User.

Accessing the Driver from Windows NT 4.0

1. Click Start, point to Settings, and then select Printers.
2. Click the EPSON Stylus COLOR 400 icon.
3. Open the File menu and select Document Defaults. You see the Main menu.

Using the Printer Driver

When you access the printer driver, you may need to click the Main tab to view the Main menu.



Most of the basic driver settings you'll need to check are on the Main menu. Settings controlling the paper size, orientation, and layout are on the Paper menu. You can run the printer utilities from the Utility menu (see Chapter 4 for details).

For a description of all the settings available in the printer driver, see page 1-7.

Checking Basic Settings

For most printing, you'll only need to check these few basic settings to make sure they're correct for your print job. The Current Settings box on the Main menu lists many of the options currently selected in the driver.



Note:

If you select Automatic mode and the Plain paper Media Type, you see the Quality/Speed slider on the Main menu. Click the arrows or use the scroll box to select settings appropriate for either high quality or high speed, depending on the document type and the results you require.

To cancel your changes and exit the driver, click the Cancel button at the bottom of the menu at any time.

- ▶ **Mode (Main menu).** Select Automatic so the printer software can automatically choose the best settings based on the data in your print file. Choose Advanced to customize your settings; see the next section for details.
- ▶ **Media Type (Main menu).** Be sure to accurately choose the media type you have loaded in your printer so the driver's automatic features can accurately tailor your settings for it. See page 1-11 for details.
- ▶ **Ink (Main menu).** Select Color if your print job contains any color data; select Black if you're printing only in black.
- ▶ **Paper Size, Orientation (Paper menu).** Choose the size of paper you've loaded in the printer and the orientation of the image on the page.

Once you've changed these basic settings as needed, check the Current Settings box on the bottom of the menu to see if the other settings, such as Print Quality, are correct for your document. If you're ready to print, click OK. If you need to adjust them, use Advanced mode as described in the next section.

Using Advanced Mode

If you want to tailor your settings for a particular document type or just customize them to suit your needs, select Advanced mode on the Main menu. When you choose Advanced mode, the Custom Settings drop-down list and the More Settings and Save Settings buttons become active.

Selecting a Document Type

To select settings that are best for a particular document type, click the arrow in the Custom Settings drop-down list. Then choose one of these document types:



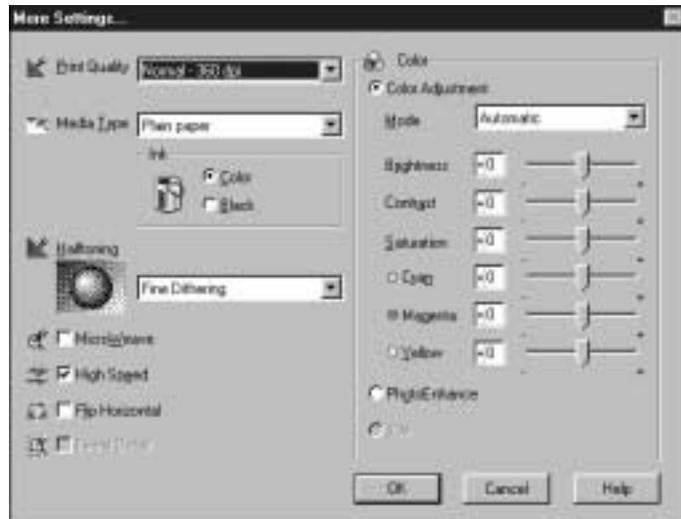
Note:
Be sure to also select the Media Type you've loaded in the printer and the correct Ink settings because the settings chosen for your document type depend on this information. Some settings may be limited by the document type you select.

- ▶ **Photo** for printing scanned photographs
- ▶ **Text/Graph** when printing text and graphs, such as presentation charts
- ▶ **PhotoEnhance** for printing images captured using a video camera, digital camera, or scanner. Produces sharper images and more vivid colors by automatically adjusting the contrast, saturation, and brightness. Corrects for overall under- and over-exposure of the original image.
- ▶ **Economy** for faster printing of text drafts on plain paper to save ink.

Each document type automatically sets other options in the printer driver, such as Print Quality and Halftoning, so you get the best results. You can also add custom document types to the list, as described on the next page.

Customizing Advanced Settings

To select your own Advanced mode settings, click the More Settings button on the Main menu to bring up the More Settings box.



In this dialog box you can change the Media Type and Ink settings you made on the Main menu, if necessary, and adjust many other settings to suit your needs. Then you can save the settings as a document type for later use, as described in the next section.

For a description of advanced settings (More Settings dialog box), see page 1-8.

Saving Customized Settings

You can save your group of custom settings with a unique name and add it to the Custom Settings drop-down list on the Main menu. Then you can easily select the settings (up to 10 groups) whenever you want to use them.

1. On the Main menu, select Advanced mode.

2. Change your printer driver settings as necessary.
3. Return to the Main menu and click the Save Settings button to bring up the User Defined Setting dialog box.



4. Type a document name for your custom settings in the Name field (up to 16 characters).
5. Click Save.

The name you assigned to the settings now appears in the Custom Settings drop-down list so you can choose it whenever you want to use the settings.

To delete a custom document type, select Advanced mode and the document type in the Custom Settings drop-down list. Then click Save Settings, select the document type in the User Defined Setting box, and click Delete. (You cannot delete any of the predefined document types.)

Printer Driver Setting Summary

The following tables summarize the settings available in each menu tab (with default values in bold type). See your printer driver's online help for more details, as described on page 1-16.

Basic Printing

Main menu settings

Setting	Options	Description
Mode	Automatic Advanced	See page 1-4 for details.
Advanced mode document types *	Custom Settings Photo Text/Graph PhotoEnhance Economy	See page 1-5 for details.
Quality/Speed slide bar **	Quality Speed	See page 1-4 for details.
Media Type	Plain paper 360 dpi Ink Jet Paper Photo Quality Ink Jet Paper Photo Quality Glossy Paper Photo Quality Glossy Film Ink Jet Transparencies	See page 1-11 for a table of EPSON media names and the Media Type settings they require.
Ink	Color Black	If your print job contains any color data, choose Color. If it contains only black data, select Black.

* Available only when using Advanced mode.

** Available only when using Automatic mode and Plain paper.

More Settings dialog box settings

Setting	Options	Description
Print Quality *	Fine - 720 dpi Normal - 360 dpi Economy	Selects either 720 dpi, 360 dpi, or Economy printing mode.
Media Type	Plain paper 360 dpi Ink Jet Paper Photo Quality Ink Jet Paper Photo Quality Glossy Paper Photo Quality Glossy Film Ink Jet Transparencies	See page 1-11 for a table of EPSON media names and the Media Type settings they require.
Ink	Color Black	If your print job contains any color data, choose Color. If it contains only black data, select Black.

More Settings dialog box settings

Setting	Options	Description
Halftoning **	No halftoning Error diffusion Coarse Dithering Fine Dithering	Sets the method used to place dots of ink on the paper. See the printer driver online help for details.
MicroWeave	On Off	Controls printing of dots in fine increments.
High Speed	On Off	Controls bidirectional printing mode.
Flip Horizontal	On Off	Lets you create a mirror image (useful for creating transfer images).
Finest Detail	On Off	Controls printing of dots in the finest increments.
Color Adjustment settings	On or Off Mode Automatic Photo-realistic Vivid No Color Adjustment Brightness -25% to +25% (0%) Contrast -25% to +25% (0%) Saturation -25% to +25% (0%) Cyan -25% to +25% (0%) Magenta -25% to +25% (0%) Yellow -25% to +25% (0%)	Control the color correction technique and various image and color adjustments when you're not using PhotoEnhance or ICM mode (described below).
PhotoEnhance	On Off	Produces sharper images and more vivid colors by automatically adjusting the contrast, saturation, and brightness. Corrects for overall under- and over-exposure of the original image.
ICM (Windows 95 only)	On Off	Turns on an Image Color Matching color correction mode to match your screen and printed colors.

* The Print Quality is selected automatically depending on the current Media Type. If you choose a Print Quality setting that is not appropriate for your media, the driver changes the Media Type setting. Always check that your Media Type is still correct after changing the Print Quality.

** In Automatic mode, the Halftoning setting is selected based on the data encountered in your print job. In Advanced mode, Halftoning is preselected for each document type setting. No Halftoning is available only when you select Black as the Ink setting.

Basic Printing

Paper menu settings

Setting	Options	Description
Paper Size	A4 210 × 297 mm Letter 8 1/2 × 11 in Legal 8 1/2 × 14 in B5 182 × 257 mm A5 148.5 × 210 mm A6 index card 105 × 148 mm Executive 7 1/2 × 10 in Half Letter 5 1/2 × 8 1/2 in Index card 5 × 8 in Index card 8 × 10 in EPSON Photo Paper 4 × 6 in Envelope #10 4 1/8 × 9 1/2 in Envelope DL 110 × 220 mm Envelope C6 114 × 162 mm User Defined *	Indicates the size of the paper or other media you have loaded in the printer.
Duplication Method	Copies 1 to 99 Collate On or Off Reverse Order On or Off	Lets you print multiple copies and collated copies, and reverses the order in which the pages are printed.
Orientation	Portrait Landscape	Sets the direction of printing on the page.
Printable Area **	Maximum Centered	Selects the print margin to the maximum printable area or centered on the page.

* Using this option, you can add a customized paper size in this size range:
Width: 3.9 to 9.5 inches (100 × 241 mm)
Length: 3.9 to 43.9 inches (100 × 1117 mm)

** This option is not available when you're using a User Defined Paper Size.

Utility menu options

Utility	Description
Status Monitor *	See page 1-12 for details.
Nozzle Check	See Chapter 4 for details.
Head Cleaning	
Print Head Alignment	

* Available only when you're using Windows 95.

Selecting the Correct Media Type Setting

Use this table to help you match the media type you loaded in the printer with the Media Type setting in the printer driver. For additional information, see Chapter 2.

When you load media with this name . . .	Load a maximum of this many sheets . . .	Then select this Media Type setting in your printer software . . .
Plain paper (single sheets)	100 letter size	Plain paper
Envelopes (remember to set the adjust lever forward)	10 ¹	
Labels (single sheets)	1	
EPSON 360 dpi Ink Jet Paper	70 letter size 30 legal size	360 dpi Ink Jet Paper
EPSON Special Coated Paper for 360 dpi Printing		
EPSON High Quality Ink Jet Paper	70 letter size 30 legal size	Photo Quality Ink Jet Paper
EPSON Photo Quality Ink Jet Paper		
EPSON Special Coated Paper for 720 dpi Printing		
EPSON Photo Quality Ink Jet Cards	30 cards ¹	
EPSON 720 dpi Index Cards		
EPSON Photo Quality Self Adhesive Sheets	1	
EPSON Photo Quality Glossy Paper	20 letter size	Photo Quality Glossy Paper
EPSON Photo Paper	20 ¹	
EPSON Photo Quality Glossy Film (use with support sheet)	30 letter size	Photo Quality Glossy Film
EPSON High Quality Glossy Paper (use with support sheet)	30 letter size	
EPSON Ink Jet Transparencies (use with support sheet)	10 letter size	Ink Jet Transparencies
EPSON Iron-On Transfer Paper ²	1 sheet	

¹ Load with the short edge leading into the feeder.

² Use the Flip Horizontal option to reverse your image before you print it- especially if it includes text- so the image will appear correctly when it's transferred. See Chapter 2 for instructions.

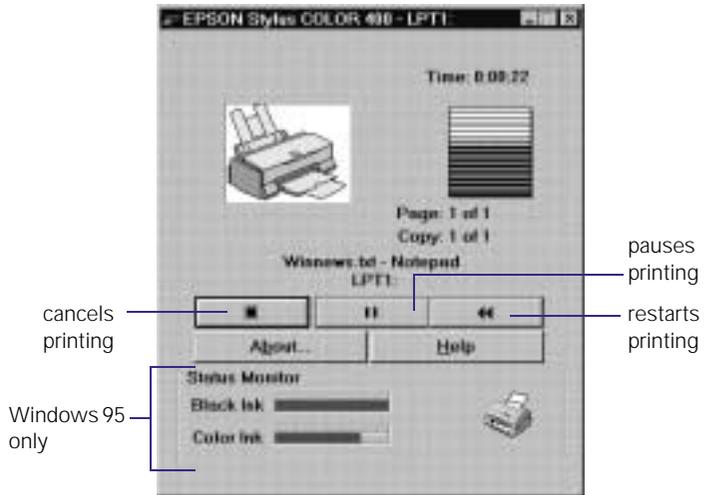
Using the Spool Manager Programs



If you don't want the Despooler dialog box to appear each time you print you can turn it off. To do this, start Spool Manager, open the View menu, and select Show Despool Popup; the checkmark next to the option disappears.

Your printer uses the EPSON Spool Manager to send data to the printer so you can continue working in your software program while printing. Spool Manager also includes the Despooler and Status Monitor (Windows 95 only) programs to let you monitor and control the print job without exiting your application program.

The Despooler dialog box, similar to the one shown below, appears when you send a print job to the printer so you can monitor the progress of the print job. Use the buttons to cancel, pause, or restart the job.



Note:
The Status Monitor appears only if your printer is connected to the host computer; it does not appear when you are printing over a network with the printer connected to another computer.

If you're using Windows 95, the Status Monitor box appears inside the Despooler dialog box (as shown above) each time you send a print job. It includes a gauge representing the amount of ink left in the cartridges and an icon that reports the current status of your printer. The icon also alerts you to any printer error conditions.

The Status Monitor displays these icons:

	Checking the printer status.
	A printing error has occurred and your printer cannot print.
	The printer is ready to print.
	The printer is currently printing.
	The ink level is low or empty; check the Ink Out light on the control panel and replace the cartridge.



Note:
In Windows 3.1, you may not see the Spool Manager icon at the bottom of your screen if the Program Manager window or an application window is maximized. Reduce the window size to reveal the icon.

If you need to run Spool Manager while you're printing, select the icon (Windows 3.1) or button (Windows 95) near the bottom of your screen. You can also run Spool Manager from the EPSON program group or folder when you're not sending a print job. (See the printer driver online help utility, as described in the next section, for details on using Spool Manager.)

Network Printing on a PC

You can use your printer on a network under Windows NT, Windows 95, or other network operating systems. First you need to set up your printer using either the network's printer setup functions or your printer software's built-in network support.

For instructions on using the printer software's network support, see "Using the Printer Software's Built-in Network Support."

Network Printing with Windows NT 4.0

If you connected the printer directly to a Windows NT 4.0 server, see your Windows NT documentation for instructions on configuring your printer for the network.

Using the Printer Software's Built-in Network Support

To use your printer software's built-in network support, you first need to install the printer driver software on all the network computers that will use the printer. See the *Setup Guide* for instructions. Once the printer software is installed, you can set up Spool Manager to send print job files from each computer to a shared directory on the computer connected to the printer.

Follow the steps in the next sections to set up a print job directory on the system connected to the printer (the host system) and each remote system (client) on the network. For Windows 95, you also need to specify the port and network path to the printer, as described on page 1-15.

Setting Up the Host System

Follow these steps to set up the computer connected to the printer:

1. Create an icon for the EPSON Spool Manager4 (EPSPMGR4.EXE in the \WINDOWS\SYSTEM folder or directory).
2. Place this icon in the Startup folder.
3. Double-click the EPSON Spool Manager4 icon to open the Spool Manager window.
4. Double-click the EPSON Stylus COLOR 400 print queue. The Queue Setup dialog box appears.

5. Click the Remote Despool tab and then click the Printing from remote queues option.
6. Click the Browse button and select the remote server directory that will receive print job files.
7. Click OK and minimize the Spool Manager window.

Setting Up Remote Systems

Follow these steps to set up the client computers on the network:

1. Open the Spool Manager window.
2. In the Spool Manager window, double-click the EPSON Stylus COLOR 400 print queue. The Queue Setup dialog box appears.
3. Click the Spool to remote printer button.
4. Click the Browse button and select the directory you're using for print job files on the host system.
5. Click OK and minimize the Spool Manager window.

Setting Up Your Network Path in Windows 95

If you want to use your printer on a network running Windows 95, you need to set up the port and network path on the computer connected to the printer. Follow these steps:

1. Double-click My Computer.
2. Double-click the Printers folder.
3. Right-click the EPSON Stylus COLOR 400 icon and choose Properties.
4. Click the Details tab.



Note:

If you want to print from DOS applications as well as from Windows applications, click the Capture Printer Port button instead of the Add Port button. In the Device box, select the printer port your printer is connected to, then specify the network path to the printer. Make sure Reconnect at logon is selected, then click OK.

5. Click the Add Port button, then specify the network path to the printer and click OK.
6. Open the Spool Manager window.
7. In the Spool Manager window, double-click your printer's queue. The Queue Setup dialog box appears.
8. Make sure the Use Print Manager for this port option is checked. Then click OK.

Using Online Help

For complete information about using the printer driver, you can easily access online help any time. It provides detailed descriptions of the different settings and options.

To access online help from the printer driver while you're using a Windows application, click the Help button at the bottom of the menu tab. Then select a help topic.

You can also access online help when you're not using the driver, as described below.

Accessing Online Help from Windows 95

Click the Start button, point to Programs, and Epson, and then click EPSON Stylus COLOR 400. If you need instructions for how to use help, click the Help button in the help screens.

Accessing Online Help from Windows 3.1

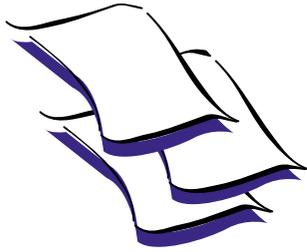
To access online help from Program Manager, open the EPSON program group and click the EPSON Stylus COLOR 400 icon. If you need instructions for how to use help, click the Help button in the menu bar.



With Windows 95 and Windows NT, you can get specific help related to any item in the menus by right-clicking the item and then clicking the What's This? prompt.

Accessing Help from Windows NT 4.0

Click the My Computer icon, then click the Printers icon. Right-click the EPSON Stylus COLOR 400 icon and select Document Defaults from the menu. In the printer software dialog box, click the Help button.



2

Printing on Special Media

Read this chapter for information about choosing and loading the best paper and other media for your printing needs.

Choosing Paper and Other Media

You can use most plain paper with your printer and achieve good results. For better results, use EPSON specially coated ink jet paper because it provides the best surface for the ink used in your printer. EPSON offers specially designed media for EPSON ink jet printers, available in a choice of sizes.

Media name	Size	Part number
EPSON 360 dpi Ink Jet Paper	A4 Letter	S041059 S041060
EPSON High Quality Ink Jet Paper	A4 Letter	S041117 S041111
EPSON Photo Quality Ink Jet Paper	A4 Letter Legal	S041061 S041062 S041067
EPSON Photo Quality Glossy Paper	A4 Letter	S041126 S041124
EPSON Photo Paper	4 × 6	S041134
EPSON Photo Quality Glossy Film	A6 A4 Letter	S041107 S041071 S041072
EPSON Ink Jet Transparencies	A4 Letter	S041063 S041064
EPSON Photo Quality Ink Jet Cards	A6 8 × 10	S041054 S041122

Media name	Size	Part number
EPSON Iron-On Transfer Paper	Letter	SE41001, SE41002
EPSON Photo Quality Self Adhesive Sheets	A4	S041106

To order EPSON papers and other media, contact your dealer or call EPSON Accessories at **(800) 873-7766** (U.S. sales only). In Canada, please call **(800) 873-7766** for dealer referral.

Media Loading Guidelines

- If the corresponding Media Type option for your paper is not shown in the Media Type list, change the Print Quality setting in the More Settings dialog box, select Automatic as the Mode setting, or change the predefined setting in the Custom Settings list on the Main menu.
- In addition to the Media Type option, remember to select the correct Paper Size for your media.
- Some special media have a cut corner that you need to position correctly; follow any instructions in the package. Always handle sheets by the edges, and don't touch the printable surface.

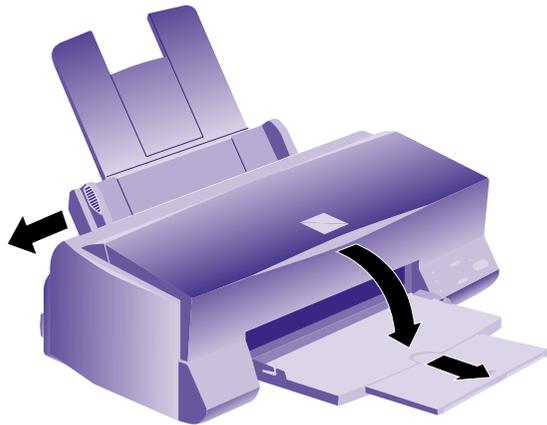
If the special media has protective sheets between each sheet of media, be sure to remove the protective sheets before printing.

- Be sure to load the printable side of the media face up with the top edge leading into the printer.
- Use ink jet papers within one year of purchase. Use glossy media and transparencies within six months. Return unused sheets and envelopes to their original packages as soon as possible. See the Appendix for more media storage information.
- Some EPSON media include a cleaning sheet. **Do not** use the cleaning sheets with this printer. They may damage the printer.

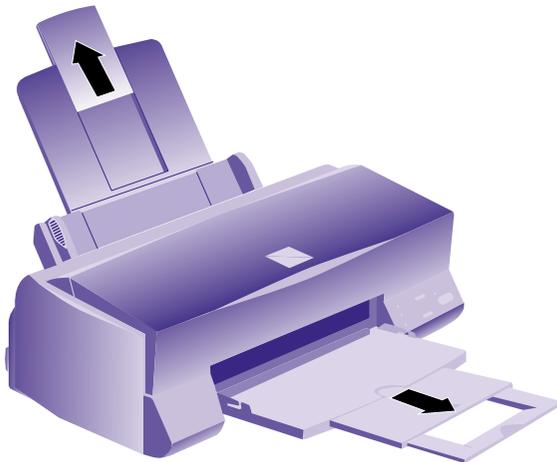
Loading Plain Paper

Always load paper or other media with the printable side facing up. Look for an arrow on the paper packaging to indicate the printable side.

1. Lower the output tray and slide out the extension. Then slide the left edge guide all the way left.

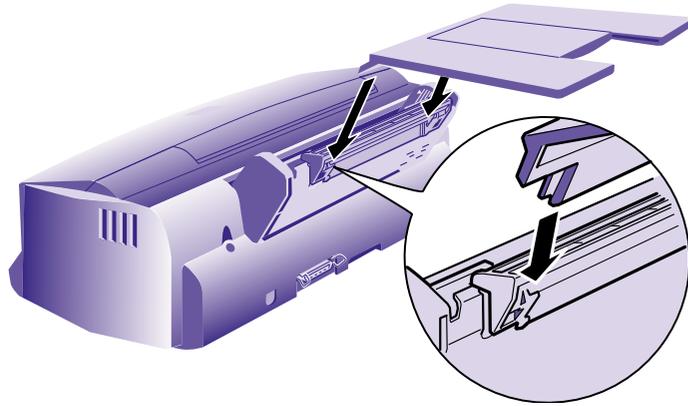


To load long paper, pull out the paper support extension and both output tray extensions.



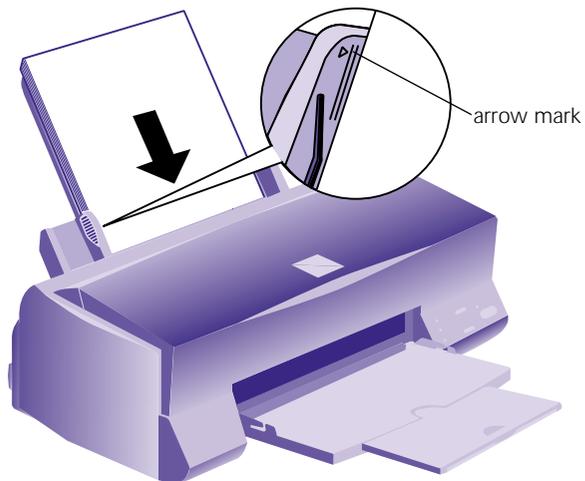
Printing on Special Media

To print on transparencies, remove the paper support and reinstall it in the rear paper support slot.

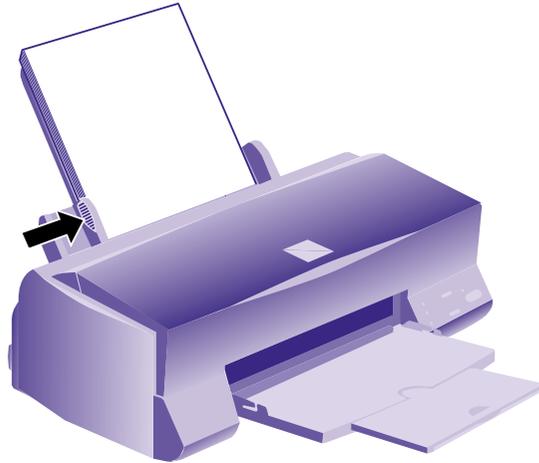


Note:
Don't load paper above
the arrow mark inside the
left edge guide.

2. Fan a stack of paper and then even the edges.
3. Load the stack with the printable side up and the short edge first. (Load pre-printed forms and letterhead top edge first.) Place the paper's right edge against the right edge guide.



4. Slide the left edge guide back against the stack of paper.



5. Select the Media Type and other printer driver settings that are appropriate for the media you loaded, as described in Chapter 1.

Loading Special Media

When loading special media, use the same steps described in the previous section, but keep the following guidelines in mind.



Note:
Some special media have a cut corner that you need to position correctly; follow any instructions in the package. Always handle the sheets by the edges, and don't touch the printable surface.

EPSON 360 dpi, High Quality, and Photo Quality Ink Jet Paper

You can load paper up to the arrow mark on the left edge guide. If you use legal-size ink jet paper, don't load it more than half way to the arrow mark.



Caution:
Don't use the cleaning sheets that may be included with your special media; they may damage the printer.

EPSON Photo Quality Glossy Paper, Glossy Film, and Transparencies

Before loading transparencies, reposition the paper support as shown on page 2-4. For media or transparencies, put a support sheet (packed with the media) or a plain paper sheet beneath the stack.

You can load up to 20 sheets of glossy paper, up to 30 sheets of glossy film, or up to 10 transparencies. If you load multiple sheets of glossy film, the minimum top margin you can use is 1.2 inches (30 mm). For best results, or to print with a smaller top margin, load and print glossy film one sheet at a time.

Remove each sheet from the output tray immediately after it is printed and make sure each sheet is dry before stacking it.

EPSON Photo Quality Self Adhesive Sheets and Iron-On Transfer Paper

You should load these media one sheet at a time. Make sure your adhesive sheets are fully adhered to their backing sheet before you load it.

When printing on transfer paper, be sure to invert the image by selecting a Flip Horizontal option in your software or the printer driver. Also, select Ink Jet Transparencies as your media type. (See Chapter 1 for details.) Follow the instructions in the paper package to iron the image onto a surface.

EPSON Photo Quality Index Cards

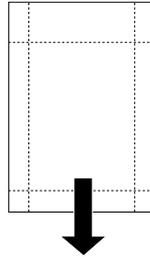
You can load up to 30 index cards with a support sheet (packed with the cards) or a sheet of plain paper beneath the stack. If ink smears on the cards, set the adjust lever to the + position as shown on page 2-9.

EPSON Photo Paper

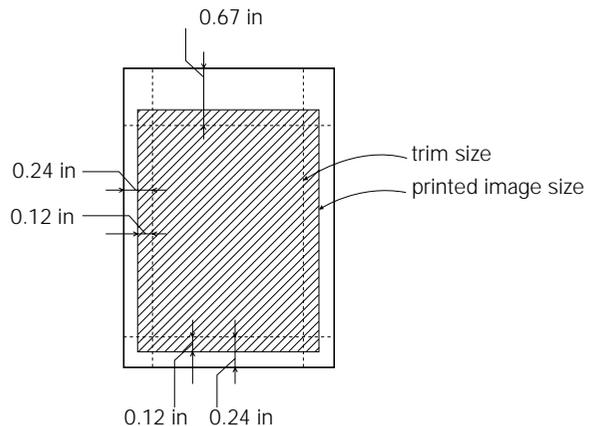
You can use these cards to print photographs that look almost as good as the ones you get from film processing. Photo Paper (4 × 6) is perforated around the edges, so you can trim your printouts and “bleed” the photo— extend it to the edge of the paper— on all sides.

You can load up to 20 sheets of Photo Paper at a time. Make sure you place the included support sheet beneath the stack, but don't print on it. Keep the following in mind when using Photo Paper.

- ▶ Load the paper with the whiter side facing up and the perforated margins positioned as shown:



- ▶ When you create the image in your application software, size it to 4.25 × 6.25 inches. Note that the outside edges of your image will be cut off when you remove the perforated margins.



- ▶ Choose EPSON Photo Paper 4 × 6 in as the Paper Size setting and Maximum as the Printable Area setting.
- ▶ Choose Photo Quality Glossy Paper as the Media Type setting.
- ▶ After you print your picture, fold the paper back and forth along the perforations and carefully tear the margins off.

You can use the EPSON Photo Paper like a postcard. Simply print your image on the glossy side of the paper using the Photo Quality Glossy Paper media type setting and let your image dry. Then print your message on the uncoated side of the paper using the 360 dpi Ink Jet Paper media type setting.

To keep your printouts looking their best, store them in a plastic bag or other airtight covering and protect them from heat, humidity, and direct sunlight.

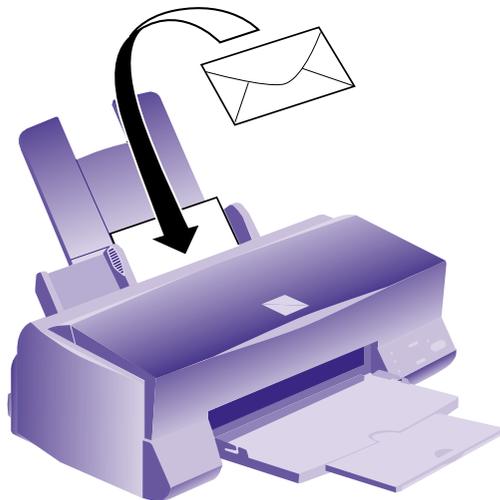


Note:

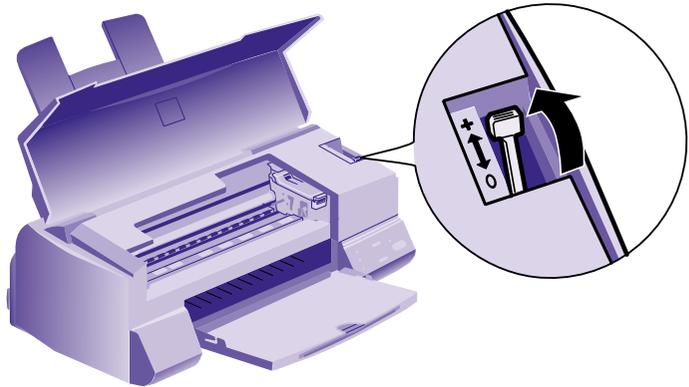
Use ink jet papers within one year of purchase. Use glossy media and transparencies within six months. Store unused media in its original package and keep it away from high heat and humidity. See the Appendix for more storage information.

Envelopes

You can load up to 10 envelopes as shown. Select Plain paper as your Media Type setting and don't use the Fine - 720 dpi Print Quality setting.



If ink smears when printing on envelopes or other thick media, set the adjust lever to the + position. To do this, open the printer cover and position the lever as shown. Then close the cover and print. (Be sure to return the lever to the 0 position before printing on other media.)

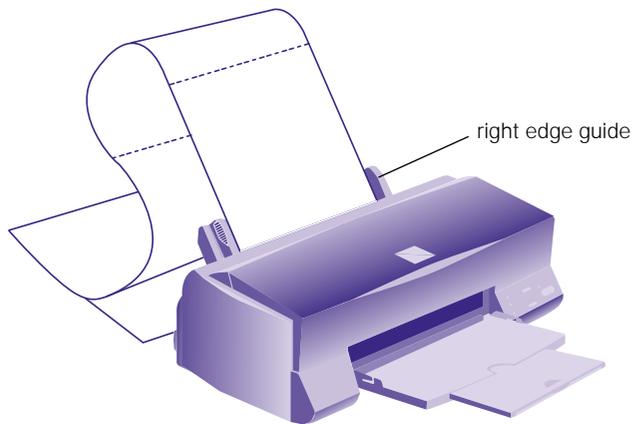


Printing Banners and Other Custom Size Projects

You can use banner paper or ordinary (continuous-form) computer paper to print a banner up to 44 inches long. You can also print on any size paper that fits into the printer (at least 3.94×3.94 inches), by using the custom page size feature of your printer software.

1. To make a 44-inch banner with continuous-form computer paper, first tear off four sheets and remove the perforations at the edges. If you are using banner paper, cut the paper to the length you want for easier handling.

2. Insert the paper in the printer as shown. The right edge of the paper should be against the right edge guide:



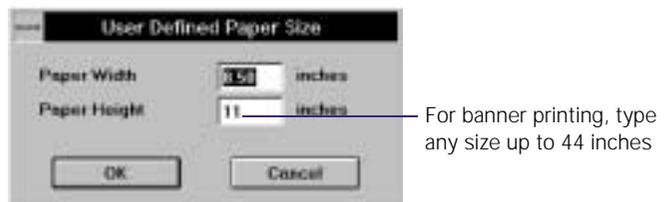
3. Slide the left edge guide next to the left edge of the paper.
4. Create the document in your word processor or other application software. You can create a banner in either portrait or landscape orientation.
5. Click the print icon or choose Print or Print Setup from the File menu. You see a printing dialog box.
6. Make sure your printer is selected, and then click the Printer, Setup, Properties, or Options button. (You may have to click a combination of these buttons.) You see the Main printer settings dialog box,

7. Click the Paper tab. You see a dialog box like the following:



8. Choose the paper you want to use from the Paper Size list. If you want to print a banner or other custom-size document, choose User Defined.

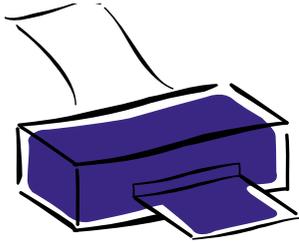
If you choose User Defined, the following dialog box appears:



9. To print a banner, type 8.5 inches for the Paper Width and 44 inches for the Paper Height. (This works for both “landscape” and “portrait” style banners.) Click OK.
10. Choose Portrait or Landscape if you haven’t already specified the orientation in your application software. Set the printable area if necessary.

Printing on Special Media

11. Click the Main tab to return to the Main printer settings dialog box. Make sure you choose Plain paper and the other settings you want to use, and then click OK.
12. Click Close, OK, or Print to print your banner. You may need to click a combination of these buttons.

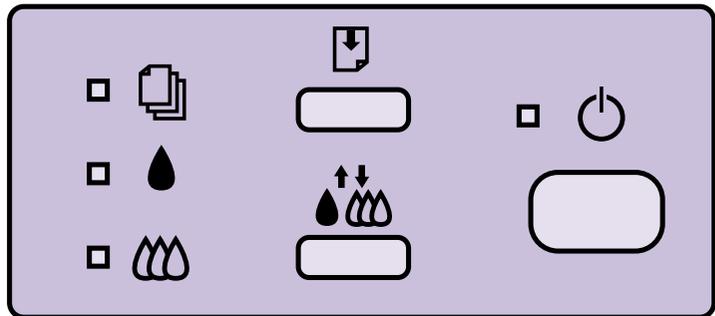


3 *Using the Control Panel*

This chapter describes the lights and buttons on the printer's control panel and how to use them.

Using the Printer's Control Panel

The printer's control panel lights display the printer status and the buttons control certain functions.



Most of the time, you control the printer using your software, but you'll use the control panel if you:

- ▶ Replace an ink cartridge
- ▶ Clear a paper jam
- ▶ Run a printer check
- ▶ Change the character table.

Lights

-  The power light is on when the printer is on. It flashes while receiving data, replacing the ink cartridge, or cleaning the print heads, and in certain error conditions.
-  On when there is no paper loaded or it's loaded incorrectly. Flashes if there is a paper jam or in certain error conditions.
-  The black ink out light flashes when black ink is low or during certain error conditions. It is on when the ink cartridge is empty or not installed, or when there is a paper jam.
-  The color ink out light flashes when color ink is low or during certain error conditions. On when the ink cartridge is empty or not installed, or when there is a paper jam.

For a list of error conditions indicated by the control panel lights and solutions for correcting them, see Chapter 5.

Buttons

-  The power button turns the printer on and off. It also resets the printer (clears its memory) if you press it twice while the power is on.
-  The load/eject button loads or ejects a sheet of paper if you press and release it within two seconds. (The printer normally loads and ejects paper automatically.) When the printer is off and you hold down the load/eject button while turning the printer on, it runs a printer check. See the next section for instructions.
-  You use the cleaning button for replacing ink cartridges and cleaning the print heads, based on the status of the ink out lights. See Chapter 4 for details. When the printer is off and you hold down the cleaning button while turning the printer on, it changes the character table. See page 3-3 for instructions.

Running a Printer Check



Caution:

Load paper that's at least 8.3 inches (210 mm) wide so ink doesn't spray onto the platen.

1. Turn off the printer and your computer.
2. Disconnect the interface cable from the printer.
3. Make sure paper is loaded in the printer.
4. Hold down the  load/eject button and turn on the printer. Then release both buttons. The printer prints out one page containing the printer's ROM version number, character table number, and a nozzle check pattern.
5. After it prints the page, turn off the printer. Reconnect the interface cable, then turn on the printer and your computer.

Changing the Character Table

The printer uses a character table for printing United States and standard European characters (PC437). If you want to use a multilingual character table (PC850), you can change to it using the printer's control panel. See the Appendix for a list of the characters available in each table.

1. Turn off the printer.
2. Hold down the  cleaning button and turn on the printer. Then release both buttons.

The character table is changed to PC850. To change it back to PC437, repeat the steps above. To check the current character table number, run a printer check as described in the previous section.



4 *Maintenance and Transportation*

The instructions in this chapter tell you how to:

- ▶ Clean the print heads
- ▶ Replace an ink cartridge
- ▶ Align the print heads
- ▶ Clean the printer
- ▶ Transport the printer.



Note:

If a  black ink out or  color ink out light is flashing or on, you need to replace an ink cartridge, not clean the print heads. See page 4-3 for instructions.

Wait until your printer has finished printing before cleaning the print heads.

Do not use the head cleaning utility with printers on a network.

Cleaning the Print Heads

If your printed image is unexpectedly light or faint, or dots are missing from the image, you may need to clean the print heads. This unclogs the nozzles so they can deliver ink properly.

Cleaning the print heads uses ink, so to conserve ink, clean them only if print quality declines.

There are two ways to clean the print heads: (1) using the Head Cleaning utility in the printer driver, or (2) using the printer's control panel buttons.

Using the Head Cleaning Utility

1. Make sure the printer is turned on and not printing, and the  black and  color ink out lights are off.
2. Access the printer driver as described in Chapter 1.



Caution:
Never turn off the printer while the  power light is flashing.

If however, the  power light is still flashing after 10 minutes and the printer is not moving or making noise, you may turn off the printer.

3. Click the Utility tab.
4. Click the Head Cleaning icon.
5. Follow the instructions on the screen to clean the print heads. Cleaning takes about two minutes, during which the printer makes some noise and the  power light flashes. It's finished when the  power light stops flashing.
6. Now check if the print heads are clean and reset the cleaning function by running a nozzle check. Make sure paper is loaded in the printer, then click Print nozzle check pattern on the Head Cleaning utility screen. See page 4-3 for instructions on examining the nozzle check pattern.

If your print quality has not improved, repeat the steps above. If you don't notice any improvement after doing this several times, check the print quality solutions in Chapter 5.

Using the Control Panel



Caution:
Never turn off the printer while the  power light is flashing.

If however, the  power light is still flashing after 10 minutes and the printer is not moving or making noise, you may turn off the printer.

1. Make sure the printer is turned on and not printing, and that the  black and  color ink out lights are off.
2. Press the  cleaning button and hold it down for three seconds to clean the print heads. Cleaning takes about two minutes, during which the printer makes some noise and the  power light flashes. It's finished when the  power light stops flashing.
3. Now check if the print heads are clean and reset the cleaning function by running a nozzle check. Make sure paper is loaded in the printer, then select Nozzle Check from the printer driver Utility menu. (See Chapter 1 for instructions.) See the next section for instructions on examining the nozzle check pattern.

If your print quality has not improved, repeat the steps above. If you don't notice any improvement after doing this two or three times, check the print quality solutions in Chapter 5.

Examining the Nozzle Check Pattern

Examine the nozzle check pattern you print. It should look something like this, with the lower pattern colored cyan, magenta, and yellow:



Each staggered horizontal and straight vertical line should be complete, with no gaps in the dot pattern. If your printout looks okay, you're done. If any dots are missing, clean the print heads again, as explained in the previous sections.

Replacing an Ink Cartridge



Caution:
To ensure good results, use genuine EPSON cartridges and do not refill them. Other products may cause damage to your printer not covered by EPSON's warranty.

If a  black or  color ink out light flashes, the indicated cartridge is low on ink. If the light stays on, the cartridge is empty and you need to replace it.

Use these EPSON ink cartridges within six months of installing them and before the expiration date on the package:

Black ink cartridge S020093
Color ink cartridge S020089

When you need new ink cartridges, contact your dealer or call EPSON Accessories at (800) 873-7766 (U.S. only). In Canada, please call (800) 873-7766 for dealer referral.



Caution:
For best results, don't replace an ink cartridge unless its ink out light is flashing or on.

If ink runs out, you can't continue printing, even if ink remains in the other cartridge.

If you press the  cleaning button when no ink out light is flashing or on, the printer cleans the print heads, as described on page 4-1.

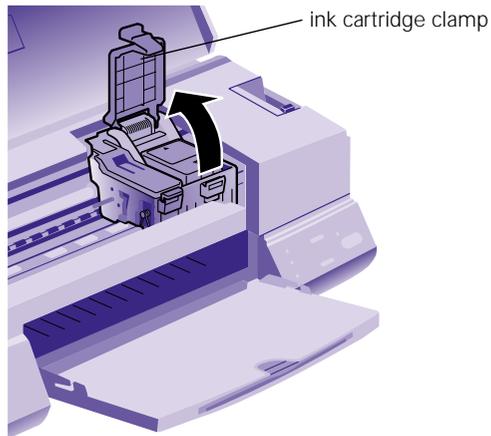
Removing and Installing an Ink Cartridge

1. Make sure the printer is on and not printing, and that either the  black or  color ink out light is flashing or on.
2. Lower the output tray and then raise the printer cover.
3. Press the  cleaning button and hold it for three seconds.

If you have to replace an ink cartridge before its ink out light flashes or comes on (if the cartridge is too old, for instance), press the  load/eject button and hold it for three seconds instead of the  cleaning button.

The print heads move slightly left to the ink cartridge install position and the  power light begins flashing. (The print heads return to their home position if you don't proceed to step 4 within 60 seconds.)

4. Pull up the ink cartridge clamp only for the cartridge you want to replace. The cartridge rises up from its holder.



5. Lift the cartridge out of the printer and dispose of it carefully.

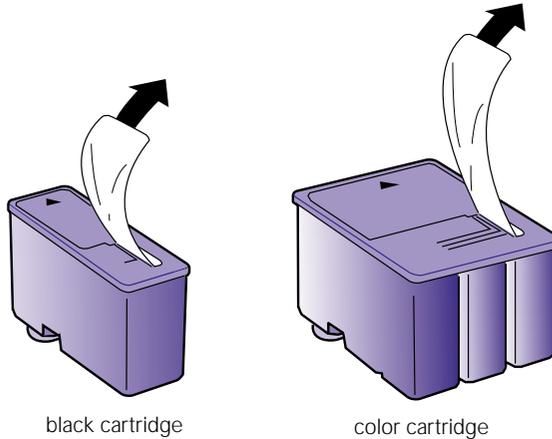


Warning:
If ink gets on your hands, wash them thoroughly with soap and water. If ink gets into your eyes, flush them immediately with water.



Caution:
You must completely remove the yellow portion of the tape seal from the top of the cartridge; leaving the tape on will permanently damage it. Do not remove the clear seal from the bottom of the cartridge; ink will out.

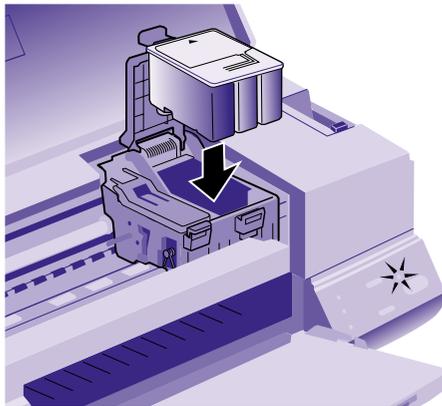
6. Remove the new ink cartridge from its packaging. Then remove only the disposable yellow portion of the tape seal as shown here.



7. Lower the ink cartridge into its holder with the label facing up and the arrow pointing to the back of the printer. The color cartridge goes on the right and the black cartridge goes on the left.



Caution:
Don't open the clamp or remove a cartridge except to replace it with a new one. Once you remove a cartridge, you can't reuse it, even if it contains ink.



8. Press down the ink cartridge clamp until it locks in place.



Caution:
Never turn off the printer while the power light is flashing.

If however, the power light is still flashing after 10 minutes and the printer is not moving or making noise, you may turn off the printer.



Caution:
Load paper that's at least 8.3 inches (210 mm) wide so ink doesn't spray onto the platen.

Do not use the print head alignment utility with printers on a network.

9. Press the  cleaning (or  load/eject) button to begin charging. (Even if you don't press a button, ink charging begins 60 seconds after you close the clamp.)
10. The power light continues to flash while the ink charges. When charging is finished, the power light stops flashing and the print heads move to the far right position. Close the printer cover and resume printing.

Aligning the Print Heads

If your printouts contain misaligned vertical lines, you may need to align the print heads.

1. Make sure the printer is turned on and paper is loaded. If you are printing, wait until your printer has stopped before continuing with step 2.
2. Access the printer driver as described in Chapter 1.
3. Click the Utility tab.
4. Click the Print Head Alignment icon.
5. Follow the instructions on the screen to print a test page and select the correct alignment.



Caution:
Don't touch the gears
inside the printer.

Never use alcohol or
thinner for cleaning; they
can damage the printer
components and case.

Don't use a hard or
abrasive brush.

Don't get water on the
printer components.

Don't spray lubricants or
oils inside the printer.



Caution:
Don't remove the ink
cartridges before
transporting the printer;
you can damage the
printer.

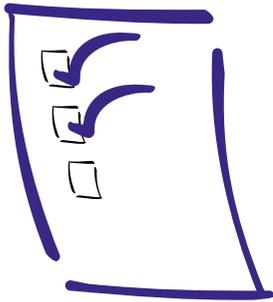
Cleaning the Printer

1. Turn off the printer, unplug the power cord, and disconnect the printer cable.
2. Remove all the paper from the sheet feeder.
3. Clean the exterior of the printer with a soft, damp cloth. Keep the printer cover closed so water doesn't get inside.
4. Clean ink out of the printer's interior with a soft, damp cloth.

Transporting the Printer

1. Turn on the printer and wait until the print heads lock in the far right position. Then turn off the printer.
2. Unplug the power cord from the electrical outlet. Then disconnect the interface cable from the printer.
3. Remove any paper from the sheet feeder, push in the paper support extension, and remove the paper support.
4. Push in the output tray extensions and close the tray.
5. Repack the printer and attachments in the original box using the protective materials that came with it. See the Notice Sheet that was packed with the printer.

Be sure to keep the printer level as you transport it. If you notice a decline in print quality after transporting the printer, clean the print heads; if output is misaligned, align the print heads. See the instructions in this chapter.



5

Troubleshooting

This chapter describes what to do if you have problems printing. See the first section, “Diagnosing Problems,” for descriptions of possible problems indicated by the control panel lights and Status Monitor icons (Windows 95 only).

Then see these sections for solutions:

- ▶ **Print quality problems**, if the print quality needs improvement
- ▶ **Problems with printing**, if your printer is having trouble printing
- ▶ **Paper handling problems**, if you have paper jams or other problems with paper handling
- ▶ **Printout is not what you expected**, if your image is placed incorrectly, garbled, inverted, blank, or printed too slowly.



Note:

If the Status Monitor box does not appear with the Despooler when you print (Windows 95 only), see page 5-9.

Diagnosing Problems

Your printer’s control panel and Status Monitor (Windows 95 only) report the status of your print job and alert you to printing errors. Check the tables in this section to diagnose problems indicated this way.

Troubleshooting

Control panel light status

Problem	 power	 paper out	 black ink out	 color ink out
Black ink low see page 5-7	On	Off	Flashing	Off
Black ink out see page 5-7	On	Off	On	Off
Color ink low see page 5-7	On	Off	Off	Flashing
Color ink out see page 5-7	On	Off	Off	On
Paper out or incorrectly loaded see page 5-7	On	On	Off	Off
Paper jammed see page 5-7	On	Flashing	Off	Off
Carriage error see page 5-8	Flashing	On	On	On
Fatal error see page 5-8	Flashing	Flashing	Flashing	Flashing

Status Monitor icon status

Icon	Problem
	The printer is checking the current status.
	A printing error has occurred and your printer cannot print. See page 5-6.
	The printer is ready to print.
	The printer is currently printing.
	The ink level is low; check the  black and  color ink out lights and replace your ink cartridge as described in Chapter 4.

In addition to the solutions in this chapter, check EPSON Answers, the EPSON Stylus COLOR 400 Help program, and the ReadMe file in the EPSON program group or folder for the latest information. If none of the suggested solutions solve your problem, see “Where to Get Help” in the Introduction.

Print Quality Problems

You can often improve print quality by:

- ▶ Cleaning the print heads (see Chapter 4 for instructions).
- ▶ Using higher quality paper appropriate for your print job (see Chapter 2 for a list of EPSON papers).
- ▶ Matching the Media Type setting in the printer driver to the type of media you loaded in the printer (see Chapter 1).
- ▶ Turning off High Speed mode in the driver when this setting is available (see Chapter 1 for details).
- ▶ Replacing the ink cartridges. (Check the status of the  black and  color ink out lights first. See Chapter 4 for instructions.)

Here are some detailed solutions to specific print quality problems.

Printed image has horizontal banding.

Possible cause	Solution
Media Type setting does not match the loaded paper.	Make sure the Media Type setting matches the loaded paper or other media. Then the printer driver can automatically select other settings for the best quality. See Chapter 1 for printer driver information.
The printable side of the paper is face down.	Remove the paper and reload it with the printable side face up. See Chapter 2 for instructions.
The print head nozzles may be clogged.	Clean the print heads. See Chapter 4 for instructions.
The ink cartridges are low on ink.	Check the  black and  color ink out lights to see which cartridge you may need to replace. See Chapter 4.

Vertical lines are misaligned or vertical banding appears.

Possible cause	Solution
The print head nozzles may be clogged.	Clean the print heads. See Chapter 4 for instructions.
High Speed mode is turned on in the printer driver.	Turn off High Speed mode if vertical lines are misaligned. See Chapter 1 for printer driver information.
The print heads are misaligned.	Run the Print Head Alignment utility to align the print heads for precise vertical lines. See Chapter 4 for instructions.

The printed image has incorrect or missing colors.

Possible cause	Solution
The Ink setting in the printer driver is set to Black.	Change the Ink setting to Color. See Chapter 1 for printer driver information.
Media Type setting does not match the loaded paper.	Make sure the Media Type setting matches the media you loaded. Then the printer driver can automatically select other settings for the best quality. See Chapter 1 for printer driver information.
The printable side of the paper is face down.	Remove the paper and reload it with the printable side face up. See Chapter 2 for instructions.
The Halftoning and Mode options are set incorrectly for your document type.	The Mode setting you select affects many other settings in your printer driver. The Halftoning setting selects the method used to lay down the dot patterns in your image. If either setting is inappropriate for your document type, the color may appear incorrectly. See Chapter 1 for printer driver information.
The print head nozzles may be clogged.	Clean the print heads. See Chapter 4 for instructions.
The ink cartridges are low on ink or one or more ink colors are empty.	Check the  black and  color ink out lights to see which cartridge you may need to replace. See Chapter 4 for instructions.
The colors displayed on your monitor do not match the printed colors.	Because your monitor and printer use different technologies to represent colors, your printed colors cannot exactly match the colors you see on your monitor screen. See the <i>Color Guide</i> for a complete description of printed colors.
The color settings in your application software or your printer driver need adjustment.	You can adjust various color settings in your printer driver, and possibly your application software, to correct color problems in your image. See your software documentation and Chapter 1 of this manual for more information.

The printed image is faint.

Possible cause	Solution
The print head nozzles may be clogged.	Clean the print heads. See Chapter 4 for instructions.
Media Type setting does not match the loaded paper.	Make sure the Media Type setting matches the loaded paper or other media. Then the printer driver can automatically select other settings for the best quality. See Chapter 1 for printer driver information.
The loaded paper may be damaged, old, or dirty.	Remove the paper and reload a new stack with the printable side face up. See Chapter 2 for instructions.
The ink cartridges are low on ink.	Check the  black and  color ink out lights to see which cartridge you may need to replace. See Chapter 4 for instructions.

The printed image is blurry.

Possible cause	Solution
The printer's adjust lever is in the 0 position.	Set the adjust lever to the + position and try printing again. See Chapter 2 for instructions.
The paper is damp or the printable side is face down.	Remove the paper and reload a new stack with the printable side face up. See Chapter 2 for instructions.
You loaded special media without a support sheet.	Follow the special media loading instructions in Chapter 2 and on the paper packaging for media that require support sheets. Also try loading your media one sheet at a time.
Media Type setting does not match the loaded paper.	Make sure the Media Type setting matches the media you loaded. Then the printer driver can automatically select other settings for the best quality. See Chapter 1 for printer driver information.
Multiple sheets entering the output tray are smearing the ink on ejected pages.	Remove each sheet from the output tray as soon as it is printed to prevent smearing, especially if you use transparencies.
Ink has leaked inside the printer.	Clean carefully inside the printer to remove spilled ink. See Chapter 4 for instructions.



Note:
If you're using Windows 95 and you see the New Hardware Found screen after installing the printer software, click Do not install a driver and click OK.

Problems with Printing

If the printer won't print, first check that:

- ▶ The printer is turned on; the ⏻ power light is on.
- ▶ Paper is loaded in the printer.
- ▶ The printer is plugged into a working electrical outlet that's not controlled by a switch or timer.
- ▶ The interface cable is securely connected to the printer and computer and that both are turned on.

If you still can't print, check these possible solutions, some based on the status of your control panel lights.

All lights are off.

Possible cause	Solution
Printer is not receiving power.	Turn on the printer, or Turn off the power and plug in the power cord securely, or Make sure the outlet is not controlled by a switch or timer and is operable.

Only the ⏻ power light is on, but nothing prints.

Possible cause	Solution
The interface cable is disconnected.	Turn off your printer and computer. Then make sure the cable is connected securely and meets the printer's specifications. Try printing again.
Printer may have an internal problem.	If the cable was not the problem, turn off the printer and computer, disconnect the interface cable, and run a printer check as described in Chapter 3.

Possible cause	Solution
Printer or application software may be installed incorrectly.	<p>If the printer check works, check your printer and application software for correct installation. If you're printing on a Windows 95 network, you may need to set up your printer for network printing. See the steps below.</p> <p>If it still doesn't print, your computer may not have enough memory to handle the data in your print file. Try:</p> <ul style="list-style-type: none"> ▶ reducing the resolution of your image ▶ selecting fewer colors or a lower resolution for your Windows display ▶ changing to a lower resolution in your display adapter software, if you have any ▶ adding more memory to your computer
Printing is stalled in Spool Manager.	Delete the stalled print jobs in Spool Manager and resume printing; see page 5-11 for instructions.
Clogged print heads or old ink cartridges.	<p>If it sounds like it's trying to print but doesn't feed paper, clean the print heads; see Chapter 4 for instructions.</p> <p>If cleaning doesn't help, replace the cartridge. For information on cartridge life and replacement instructions, see Chapter 4.</p>

The  paper out light is flashing or on.

Possible cause	Solution
If flashing, paper is jammed.	Remove the paper and follow the guidelines for preventing jams as described on page 5-10.
If on, paper is not loaded or is loaded incorrectly.	Load paper or remove the stack and reload it as described in Chapter 2. Then press the  load/eject button to turn off the light and resume printing.

A  black or  color ink out light is flashing or on.

Possible cause	Solution
If flashing, the ink supply is getting low	You need to replace the indicated ink cartridge soon; see Chapter 4 for instructions.
If on, the ink cartridge is empty.	You must replace the indicated ink cartridge now to be able to print; see Chapter 4.

All lights are flashing or on.

Possible cause	Solution
A carriage or fatal printer error may have occurred.	Turn off your printer, wait a few seconds, and turn it on again. If the lights still flash or stay on, you probably have a carriage or other printer error; see the Introduction for help information.

The printer software installed with Windows 3.1 does not work correctly after you upgrade to Windows 95.

Possible cause	Solution
Your printer software is not set up correctly for Windows 95.	Reinstall the printer software after installing Windows 95, as described in the <i>Setup Guide</i> .

You see error messages because of printing conflicts.

Possible cause	Solution
If you see conflict error messages or printing is very slow, the problem may be caused by temporary files in the EPSON Spool Manager temporary file directory.	<p>To change the Spool Manager default directory, follow these steps:</p> <ol style="list-style-type: none">1. Make a directory on your hard disk where you want Spool Manager to store the files, for example, C:\SPLTEMP.2. Open the EPSON program group or folder and double-click Spool Manager4.3. Make sure Epson Stylus COLOR 400 is selected, and then open the Queue menu.4. Select Setup. In the Queue Setup dialog box, change the spool directory to the one you created in step 1. Also make sure the Use Print Manager for this port checkbox is checked. Then select OK.5. Open the Options menu and select Default Spool Directory. In the dialog box, change the spool directory to the one you created in step 1. Then select OK.6. Close Spool Manager.

In Windows 95, the Status Monitor box does not appear with the Despooler.

Possible cause	Solution
The Windows Print Manager may be interfering with the Status Monitor.	<p>Double-click Spool Manager4 in the EPSON folder. Open the Queue menu and select Setup. Make sure the Use Print Manager for this port checkbox is not checked.</p> <p>Then check your bidirectional spool settings. Click Start, point to Settings, and select Printers. Double-click the EPSON Stylus COLOR 400 icon, open the Printer menu, and select Properties. Click the Details tab, select Spool Settings, and make sure the Enable bi-directional support for this printer option is turned on. Click OK. The Status Monitor should now appear when you send your next print job.</p>

Paper Handling Problems

You can avoid most paper handling problems by:

- ▶ Using smooth, high-quality media designed for ink jet printers that meets the media specifications in the Appendix.
- ▶ Following all loading and handling instructions included with the media.
- ▶ Loading the media as described in Chapter 2 with the printable side face up.

If you have problems with paper feeding, paper jams, or ejected paper, check here for solutions.

Paper does not feed.

Try this	Then do this
Remove the stack of paper from the sheet feeder.	Check that the paper: <ul style="list-style-type: none">▶ Isn't curled or creased.▶ Isn't too old (see Chapter 2 or your paper packaging for more information).▶ Isn't loaded above the arrow on the left edge guide.▶ Isn't jammed inside the printer. (If the  paper out light is flashing, paper is jammed.)▶ Then reload the paper as described in Chapter 2, making sure the left edge guide is adjusted to fit the paper's width.

Multiple pages feed at the same time.

Try this	Then do this
Remove the stack of paper.	Make sure the paper isn't too thin (see the paper specifications in the Appendix). Fan the edges of the stack of paper to separate the sheets. Reload the paper as described in Chapter 2. If more copies of a page or document are printing than you expected, check that the Copies settings in both the printer driver and your application program are set to 1. See Chapter 1 for printer driver information.

Paper jams inside the printer.

Try this	Then do this
Turn off your printer, open the cover, and remove all the paper that's inside, including any little pieces that may have torn off.	Reload the paper as described in Chapter 2. If your paper jams frequently, make sure you: <ul style="list-style-type: none">▶ Use smooth, high-quality paper, loaded printable side up.▶ Fan the stack and then even the edges before loading it.▶ Load paper beneath the arrow mark on the left edge guide.▶ Adjust the left edge guide to fit the width of your paper.

Paper doesn't eject fully or is wrinkled

Possible cause	Solution
If the paper doesn't eject fully, it may be too long for the printer.	Press the  load/eject button to eject the paper. Then see the paper specifications in the Appendix for ranges of paper sizes you can print with.
If it's wrinkled when it comes out, the paper may be damp or too thin.	See the paper specifications in the Appendix for ranges of paper thicknesses you can print with, as well as environmental requirements for storage.

Printout Is Not What You Expected

If your printout results are not what you expected, try these solutions.

Characters are incorrect or garbled.

Possible cause	Solution
Your printer driver is not the Windows default printer.	Select your printer driver as the default Windows printer driver. See your Windows documentation or online help for instructions.
Printing is stalled in Spool Manager.	Delete the stalled print jobs in Spool Manager and resume printing as follows: <ol style="list-style-type: none"> 1. Double-click the Spool Manager4 icon in the EPSON program group or folder. 2. Click on any print jobs marked Held, then open the Document menu and click Delete. 3. Exit Spool Manager and try printing again.
The interface cable is disconnected.	Turn off your printer and computer. Then make sure the cable is connected securely and meets the printer's specifications.
Your video driver may be conflicting with the EPSON driver (Windows 3.1 only).	Try using a standard VGA video driver (see your computer or video card documentation for instructions on changing video drivers). If your printout is correct, your video driver is interfering with the printer driver. Contact your computer or video card manufacturer to see if an updated driver is available.

Troubleshooting

The margins are incorrect.

Possible cause	Solution
Margins are set incorrectly in your application software.	Check your software documentation for instructions on selecting the correct margins for your paper size.
Paper menu settings in the printer driver are set incorrectly for your paper size.	Check the settings on the paper menu to make sure they are correct for your paper size. See Chapter 1 for printer driver information.

The image is inverted as if viewed in a mirror.

Possible cause	Solution
You used a Flip Horizontal option in your application software or the printer driver.	Turn off the Flip Horizontal setting in your application software or the printer driver. See Chapter 1 for printer driver information.

The printer prints blank pages.

Possible cause	Solution
Your printer driver is not the Windows default printer.	Select your printer driver as the default Windows printer driver. See your Windows documentation or online help for instructions.
Paper menu settings in the printer driver are incorrectly set for your paper size.	Check the settings on the paper menu to make sure they are correct for your paper size. See Chapter 1 for printer driver information.

Text printing is very slow.

Possible cause	Solution
Your printer driver settings may be more appropriate for color graphics printing than black text printing.	To increase the speed and select the appropriate settings for black text, see Chapter 1 for printer driver information.

A

Technical Specifications

Printing

Printing method: On-demand ink jet
Nozzle configuration: 64 monochrome (black) nozzles
63 color nozzles (21× 3; cyan, magenta, yellow)

Printable columns and printing speed

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	343
20 (12 condensed)	160	400

Resolution: Maximum 720 × 720 dpi
Input buffer: 10KB
Print direction: Bidirectional with logic seeking for text and graphics
Control code: ESC/P Raster™
Character tables: PC437 (US, Standard Europe) or PC850 (Multilingual) selectable with control panel; see Chapter 3 for details

Paper

Paper type	Size	Paper types	Thickness	Weight
Single sheets	Letter (8.5 × 11 inches) A4 (210 × 297 mm) A5 (148 × 210 mm) B5 (182 × 257 mm) Legal (8.5 × 14 inches) Statement (5.5 × 8.5 inches) Executive (7.5 × 10 inches)	Plain bond paper and special ink jet papers distributed by EPSON	0.003 to 0.004 inch (0.08 to 0.11 mm)	17 to 24 lb (64 to 90 g/m ²)
Transparencies, Glossy film, Glossy paper, Photo paper	Letter (8.5 × 11 inches) A4 (210 × 297 mm) A6 (105 × 148 mm, glossy film only) 4 × 6 inches (102 × 152 mm, photo paper only)	Transparencies, glossy paper, glossy film, and photo paper distributed by EPSON	Glossy film and transparencies: 0.005 to 0.006 inch (0.13 to 0.15 mm) glossy paper: 0.0066 to 0.0070 inch (0.17 to 0.18 mm)	
Self adhesive sheets	A4 (210 × 297 mm)	Self adhesive sheets distributed by EPSON		
Envelopes	No. 10 9.5 × 4.1 inches (240 × 104 mm) DL 8.7 × 4.3 inches (220 × 110 mm) C6 4.4 × 6.4 inches (114 × 162 mm)	Plain bond paper or air mail paper	0.006 to 0.017 inch (0.16 to 0.43 mm)	12 to 20 lb (45 to 75 g/m ²)
Index cards	A6 (105 × 148 mm) 10 × 8 inches (254 × 203 mm)	Ink jet cards distributed by EPSON	0.0091 inch (0.23 mm)	50.7 lb (188 g/m ²)



Note:

Since the quality of any particular brand or type of paper may be changed by the manufacturer at any time, EPSON cannot attest to the quality of any non-EPSON brand or type of paper. Always test samples of paper stock before purchasing large quantities or printing large jobs.

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.

Do not load curled or folded paper.

Ink jet paper, envelopes, glossy film, glossy paper, and transparencies are usable only under normal conditions:

Temperature: 59 to 77 °F (15 to 25 °C)

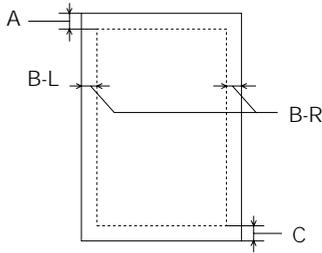
Humidity: 40 to 60% RH

EPSON Photo Quality Glossy Paper and Photo Quality Self Adhesive Sheets should be stored under the following conditions:

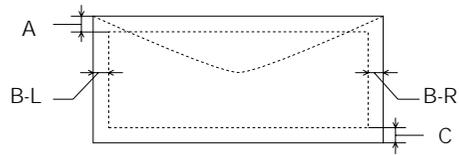
Temperature: 59 to 86 °F (15 to 30 °C)

Humidity: 20 to 60% RH

Printable area



Single sheet



Envelope

A: The minimum top margin is 0.12 inch (3.0 mm).

When loading multiple sheets of EPSON Photo Quality Glossy Film, the minimum top margin is 1.2 inches (30 mm).

B-L: The minimum left margin is 0.12 inch (3.0 mm).

B-R: The minimum right margin for single sheet paper is 0.12 inch (3.0 mm) except for letter and legal size paper. The minimum right margin for letter and legal size paper is 0.35 inch (9.0 mm).

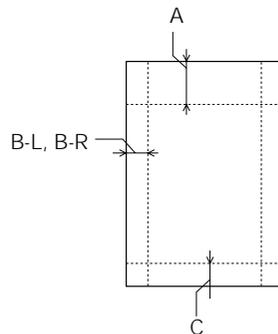
The minimum right margin for envelopes is as follows:

0.28 inch (7.0 mm) for DL envelopes.

1.10 inches (28.0 mm) for No. 10 envelopes.

0.12 inch (3.0 mm) for C6 envelopes.

C: The minimum bottom margin is 0.54 inch (14.0 mm)



EPSON Photo Paper
(dotted lines indicate perforations)

A: The maximum top margin is 0.67 inch (17.0 mm).

B-L,

B-R: The maximum left and right margin is 0.24 inch (6.1 mm).

C: The maximum bottom margin is 0.24 inch (6.1 mm).



Note:

Always load paper into the sheet feeder short edge first. However, envelopes should be loaded long edge first.

Ink Cartridge

Specification	Black ink cartridge (S020093)	Color ink cartridge (S020089)
Color(s)	Black	Cyan, Magenta, and Yellow
Print capacity*	540 pages/A4 (ISO/IEC 10561 Letter Pattern at 360 dpi)	300 pages (A4, 360 dpi, 5% duty each color)
Cartridge life	2 years from production date (if unopened) (within 6 months after opening package, at 77 °F (25 °C))	
Storage temperature	-4 to 104 °F (-20 to 40 °C) 1 month at 104 °F (40 °C)	
Transit temperature	-22 to 140 °F (-30 to 60 °C) 1 month at 104 °F (40 °C) 120 hours at 140 °F (60 °C)	
Freezing temperature**	3.2 °F (-16 °C)	-0.4 °F (-18 °C)
Dimensions	0.7 (W) × 2.1(D) × 1.5 (H) inches 19.8 (W) × 52.7(D) × 38.5 (H) mm	1.7 (W) × 2.1(D) × 1.5 (H) inches 42.9 (W) × 52.7 (D) × 38.5 (H) mm

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

** It thaws and is usable after approximately 3 hours at 77 °F (25 °C).



Caution:

To ensure good results, use genuine EPSON ink cartridges. Other products may cause damage to your printer not covered by EPSON's warranty.

Don't use an ink cartridge if the date on the package has expired.

Mechanical

- Paper feed method:** Friction with auto sheet feeder, top entry
- Sheet feeder capacity:** Maximum 100 sheets of 17 lb (64 g/m²) paper
- Dimensions:**
- Storage**
 Width: 16.8 inches (429 mm)
 Depth: 10.8 inches (275 mm)
 Height: 6.6 inches (168 mm)
- Printing**
 Width: 16.8 inches (429 mm)
 Depth: 24.1 inches (613 mm)
 27.4 inches (695 mm)*
 Height: 12.2 inches (309 mm)
 7.7 inches (196 mm)*
- * when loading transparencies
- Weight:** 11.4 lb (5.2 kg) without the ink cartridges

Electrical

Specification	120 V model	240 V model
Input voltage range	103.5 to 132 V	198 to 264 V
Rated frequency range	50 to 60 Hz	
Input frequency range	49.5 to 60.5 Hz	
Rated current	0.5A	0.3A
Power consumption	Approx. 18 W (ISO 10561 Letter Pattern)	

Environmental

Temperature:

Operation 50 to 95 °F (10 to 35 °C)
Storage* - 4 to 140 °F (- 20 to 60 °C)
1 month at 104 °F (40 °C)
120 hours at 140 °F (60 °C)

Humidity:

Operation 20 to 80% RH
Storage* 5 to 85% RH
(without condensation)

* Stored in shipping container

Safety Approvals

Safety standards:

UL 1950 with D3, CSA 22.2 950 with D3

EMC:

FCC part 15 subpart B class B
CSA C108.8

Glossary

- banding** The horizontal lines that sometimes appear when printing graphics. See also *MicroWeave*.
- buffer** The portion of the printer's memory used to store data before printing it.
- character table** A collection of letters, numbers, and symbols that provides you with the characters used in a particular language.
- characters per inch (dpi)** A measure of the size of text characters, sometimes referred to as pitch.
- CMYK** Cyan (blue-green), magenta, yellow, and black. These colored inks are used to create the subtractive system array of printed colors.
- ColorSync** Macintosh software that is designed to help you get WYSIWIG (what you see is what you get) output. This software prints colors as you see them on your screen.
- default** A value or setting that takes effect when the equipment is turned on, reset, or initialized.
- dithering** A halftoning method in which dots are arranged in an orderly pattern. Dithering works best for printing images with solid colors, such as charts and graphs. See also *halftoning*.
- dpi** Dots per inch. The dpi measures the resolution. See also *resolution*.
- driver** A software program that sends instructions to a computer device to tell it what to do. For example, your printer driver accepts print data from your word processing application and sends instructions to the printer on how to print this data.

- Error Diffusion** This halftoning setting smooths out edges by randomly placing dots of varying colors. This has the opposite effect of the Finest Detail setting.
- ESC/P** Abbreviation for Epson Standard Code for Printers. This system of commands gives you control of your printer from your computer. It is standard for all EPSON printers and supported by most application programs for personal computers.
- 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.
- Finest Detail** This printer driver setting automatically makes your printed images sharper and clearer. This has the opposite effect of the Error Diffusion setting. Be aware that this may increase the time required for printing.
- font** A style of type designated by a name.
- grayscale** A scale of shades of gray from black to white. Grayscale is used to represent colors when printing with black ink only.
- halftoning** A method of using dot patterns to represent an image. Halftoning makes it possible to produce varying shades of gray using only black dots, or a nearly infinite array of colors using only a few colors of dots.
- initialization** Returns the printer to its defaults (fixed set of conditions). This happens every time you turn on or reset the printer.
- ink jet** A method of printing in which each letter or symbol is formed by precisely spraying ink onto paper.
- interface** The connection between the computer and a peripheral such as a printer. Some printers have two interfaces, parallel and serial. A parallel interface transmits data one byte, or eight bits, at a time. A serial interface transmits data one bit at a time.
- ips** Inches per second. This scale is used to measure the printing speed.

media	Materials upon which data is printed, such as envelopes, plain paper, special paper, and transparencies.
MicroWeave	Printing technology that produces images in fine increments to reduce the possibility of banding. See also <i>banding</i> .
monochrome	This means printing with only one color of ink, which is generally black ink.
parallel interface	See <i>interface</i> .
print queue	Print jobs that are sent to the printer while it is busy are stored in a waiting line, or print queue, until they can be printed.
print server	The computer connected to the printer. It receives the jobs and then distributes them to the assigned printer. It also holds extra print jobs while the printer is busy. See also <i>print queue</i> .
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	See <i>driver</i> .
proportional printing	Printing in which the width of the character varies from character to character. For example, a capital <i>W</i> receives much more space than a lowercase <i>i</i> . The result looks more like a typeset book than a typewritten draft.
reset	To return a printer to its defaults either by sending a command, an $\overline{\text{INIT}}$ signal or by turning the printer off and then back on.
resolution	The number of dots per inch used to represent an image.
RGB	Red, green, and blue. These colors, in phosphors irradiated by the computer monitor's electron gun, are used to create the additive array of screen colors.
scalable fonts	Fonts that can be enlarged or reduced. Non-scalable fonts are called bitmap fonts and can't change in size.
screen pattern	This feature prints shaded areas as they appear on screen, instead of printing them as halftones.

- serial interface** See *interface*.
- spool** The process by which the printer driver converts the print data into codes that your printer understands. This data is then sent to the printer directly or to the print server.
- Spool Manager** An EPSON software program that converts print data into codes that your printer understands. See also *spool*.
- Status Monitor** An EPSON software program that displays the printer's status, such as paper out or the amount of ink remaining before printing.
- subtractive colors** Colors produced by pigments that absorb some colors of light and reflect others. See also *CMYK*.

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