



*HP Color PrintKit for
Macintosh™ Computers*

User's Guide

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*HP Color PrintKit for
Macintosh® Computers*

User's Guide

Part Number 17305-90012



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Welcome to the HP Color PrintKit

The HP Color PrintKit, when teamed with the PaintJet Series printers, produces high-quality color output from Apple Macintosh Plus, SE, Portable, and II computers. Version 2.0 contains the same user-friendly attributes of version 1.0, as well as more powerful features.

About the PaintJet Series Printers

The PaintJet Series printers use the Macintosh computer's QuickDraw imaging system to describe pages for printing. Some other printers designed to work with Macintosh computers use the PostScript page description language to perform this task.

The PaintJet Series printer resources enhance the capabilities of QuickDraw, providing exceptional print quality and output capabilities, while avoiding the complexity and expense of PostScript printers.

The PaintJet Series printers will provide the highest-quality output available from software application packages which work with the LaserWriter II SC, ImageWriter LQ, ImageWriter II, and ImageWriter printers.

A very small number of high-end graphics arts packages are designed to work best with PostScript-dependent printers, and although your PaintJet Series printer may still be used with these packages, feature support may be slightly limited.

For Users of Version 1.0

Your *HP Color PrintKit for Macintosh Computers* contains version 2.0 of the PaintJet printer resource. Version 2.0 **replaces** version 1.0 which was shipped in the *HP PaintJet Printer Interface Kit for Macintosh Computers*.

Version 1.0 users upgrade to version 2.0 simply by following version 2.0 installation instructions being sure to replace the printer resource. If you have installed additional fonts to use with version 1.0, you can use these same fonts with version 2.0.

Version 2.0 has the following new features:

- a Double Pass Best mode for the ultimate in smooth solid colors
- support for 32-Bit QuickDraw (you can take advantage of 32-Bit QuickDraw even if you don't have a 24-bit monitor)
- three **color blending** techniques so you can choose the best for your application
- reductions and enlargements from 25 to 400 percent
- scalable font outlines that provide any font size from 6 to 250 points in regular, bold, italic, and bold italic
- a print spooler for optional background printing

Color blending is also called dithering. Your printer creates new colors by blending the three primary colors and black.

The most noticeable changes between versions 1.0 and 2.0 occur when using fonts and colors. In almost all instances, these changes will result in higher quality output. However, in some situations you may not like the changes. This will most likely occur if:

- You carefully selected a specific output color and version 2.0 changes it.
- Version 2.0's combination of color change and default blend pattern results in a loss of contrast between two different items (e.g.; text and background) in your output.
- Version 2.0 outline fonts give slight differences in text appearance from the version 1.0.

To rename your printer resource, select the resource then click the name. Backspace to erase the current name, type the new one, and press Return.

If you follow the installation instructions, you will *replace* your version 1.0 printer resource, since both versions have the same name. However, if you rename the version 1.0 printer resource before installing version 2.0, you can use both. Use any name that isn't already in use in the System Folder. In the Chooser, you must distinguish the two printer resources by name since they have the same icons.

Important

Before using your version 1.0 printer resource, drag the 32-Bit QuickDraw icon out of the System Folder and Restart your computer. Using the version 1.0 printer resource with 32-Bit QuickDraw installed could crash your computer.

Important Differences in Fonts and Colors

<i>Version 1.0 Fonts</i>	The version 1.0 printer fonts are bitmapped fonts. A bitmapped font's character shape is associated with its size; therefore, to get the best print quality, you must have a version of the font on your disk for each size you want to print. (Scaling may reduce print quality.) The version 1.0 bitmapped fonts were provided in 10, 12, 14, 18, 24, 30, and 36 point sizes.
<i>Version 2.0 Fonts</i>	The version 2.0 printer fonts are scalable, outline fonts. Outline fonts determine character shape such that you only need one font outline for each font family, and that individual font outline can be scaled from 6 to 250 points without a loss of print quality. Scalable outline fonts provide greater flexibility and require less disk space.
<i>Both Versions Fonts</i>	The printer fonts from both versions correspond to the Macintosh Times, Helvetica, Courier, and Symbol screen fonts. However, there are some slight changes in appearance.
<i>Version 1.0 Colors</i>	Version 1.0 supports a fixed set of 256 colors. The printer resource prints the color from that set that comes closest to matching the color you selected in your document.
<i>Version 2.0 Colors</i>	Version 2.0 supports the full range of 16.8 million colors possible on a Macintosh II or SE/30. It prints a color that it <i>blends</i> to approximate the color you selected in your document. (Refer to "Working With Color" in chapter 3 for an explanation of blends.) Because the color matching process is different and more colors are available, you will see some differences in color output.



Installing the Color PrintKit

This chapter of your User's Guide helps you install your Color PrintKit, which includes: the printer resource, outline printer fonts, screen fonts, and 32-Bit QuickDraw.

Using this chapter, you will install the following on your hard disk:

- the printer resource
- the background printing option
- the HP Fonts folder (if needed)
- the printer outline font files
- 32-Bit QuickDraw software
- the screen fonts (if needed)

You install the printer resource, background printing capability, printer outline fonts, and 32-Bit QuickDraw software by dragging their icons to the System folder on your hard disk.

Important

Do not drag the 32-Bit QuickDraw folder to your System folder. Read the installation instructions later in this chapter.

You use the Font/DA Mover to install the screen fonts supplied with the Color PrintKit into the System file on your hard disk.

If you use more than one hard disk as a startup disk, be sure to copy the printer resource and the HP Fonts folder onto each of your startup disks.

You cannot use 32-Bit QuickDraw on the Macintosh Plus, SE, or Portable.

What You Need

To install your software you need:

- HP Color PrintKit disks (3 disks).
- A Macintosh Plus or later computer.
- System Software version 6.0.2 (System 6.0.2, Finder 6.1), 6.0.3 (System 6.0.3, Finder 6.1), or 6.0.4 (System 6.0.4, Finder 6.1). You can also use MultiFinder.

To find out what version of System Software you have, pull down the Apple menu and choose "About the Finder".

§ *By the way:* If you want to use 32-Bit QuickDraw, you must use System Software 6.0.3 or later.

- at least 1 megabyte of RAM

§ *By the way:* If you want to use background printing, you will need at least 2 megabytes of RAM.

- a hard disk with a minimum of 2 to 4 megabytes of unused space (background printing will require additional space)
- Familiarity with the Macintosh desktop environment, including pull down menus, dialogs, selecting, choosing, dragging, and using the Font/DA Mover.

Getting Ready

Complete the following tasks before beginning to install your software.

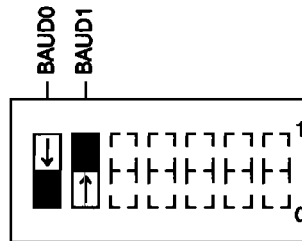
1. **Set up and connect your printer before you install your software.**

PaintJet

Follow the set-up instructions in the PaintJet User's Guide.

PaintJet XL

Follow the set-up instructions in the PaintJet XL Computer Information manual *EXCEPT*, you must set the baud rate for 19 200. Set the baud rate switches as shown below.



2. **Make working copies of the three disks in your Color PrintKit.**

Use the backup copies for installation and keep the original disks in a safe place. Refer to your *Macintosh Owner's Guide* for instructions on making backup copies of disks.

Important

Your PrintKit disks should have been locked when you received them. Check the tab to the right of the label to make sure it is set so that the hole is open. This will prevent your master disks from accidentally being erased or written on.

Installing the Printer Resource

To install the printer resource (also called a printer driver), follow these steps. If you use more than one hard disk as a startup disk, repeat the process for each hard disk you use.

To open a disk, double-click the icon representing the disk.

1. **Start your Macintosh computer and open your startup disk.**
2. **Open the System folder on the hard disk by double-clicking the icon.**

Important

If you are upgrading from version 1.0, select your current PaintJet resource and rename it or drag it to the Trash before proceeding. (Refer to "For Users of version 1.0" in the preface for information.)



HP PaintJet

3. **Insert HP PrintKit Disk 1; it will open automatically.**
4. **If you have a PaintJet printer, drag the PaintJet printer resource from HP PrintKit Disk 1 to your System Folder.**



HP PaintJet XL

If you have a PaintJet XL printer, drag the PaintJet XL printer resource from HP PrintKit Disk 1 to your System Folder.

Installing Optional Background Printing

Background printing allows you to continue using your computer while data is being sent to your printer. You must be in MultiFinder to use background printing.

If you want to have the background printing capability, you will need at least 1 MB of disk space available *in addition* to that used by the printer resource and fonts. You will also need at least 2 MB of RAM.

Important

If you do not use MultiFinder or have insufficient RAM to utilize background printing, do not install these icons. Save your disk space.

Follow these steps to install the background printing option.



Queue Watcher

1. Drag the Queue Watcher icon (background print spooler) from HP PrintKit Disk 1 to your System Folder.



Queue INIT

2. Drag the Queue INIT icon from HP PrintKit Disk 1 to your System Folder.



Queue Monitor

3. Drag the Queue Monitor icon (background print monitor) from HP PrintKit Disk 1 to your System Folder.

32-Bit QuickDraw

Your HP Color PrintKit works with Apple QuickDraw to provide color imaging. Depending on your Macintosh you may have one of three versions of QuickDraw built into the ROMs of your Macintosh.

- **QuickDraw** – Built into the Macintosh Plus, Portable, and SE, the original QuickDraw supports only 8 colors. If you have one of these machines, your Page Setup Options dialog will automatically be set for Fixed 8 Colors.
- **Color QuickDraw** – Built into all Macintosh II models and the SE/30. Color QuickDraw supports 16.8 million colors, but you can never have more than 256 show on the screen at once or print on a single page.

If you have more than 256 colors on a page, Color QuickDraw uses the standard system color palette, not your application's palette.

- **32-Bit QuickDraw** – Built into the Macintosh IIfx or shipped with your HP Color PrintKit. You can install and use 32-Bit QuickDraw on any Macintosh that has Color QuickDraw and System Software 6.0.3 or later. The newest version supports all 16.8 million colors on both the screen and a printed page. Of course, the colors you can achieve are device and application dependent.

Important

In order to install the 32-Bit QuickDraw package on your Macintosh computer, you must already have a Color QuickDraw machine.

Also, 32-Bit QuickDraw requires System 6.0.3 or later.

Refer to the "32-Bit QD Read Me" file on your HP PrintKit Disk 1 to help you decide whether to install 32-Bit QuickDraw.

- **Double-click the "32-Bit QD Read Me" icon on your HP PrintKit Disk 1 to learn more about 32-Bit QuickDraw and its system requirements.**



32-Bit QD Read Me

The actual 32-Bit QuickDraw init is on Disk 2, and the installation instructions are later in this chapter.

The HP Fonts Folder

To ensure quality text output, the System folder must contain information for scaling outline fonts to any size you may want to print. The HP Fonts folder, which is initially empty, will contain the scalable outline font files required to print fonts at their best quality.

The HP Fonts folder is contained on the HP PrintKit Disk 1. You will install this file the same way that you installed the printer resource, by dragging it to your system folder.

Important

Do you have an HP DeskWriter and a DeskWriter Fonts folder in your System Folder?

Yes. Go to the next section, *Installing the Outline Font Files*. Your DeskWriter Fonts folder will hold your outline font files. Do not rename your DeskWriter Fonts folder. If you rename the folder, your DeskWriter printer resource may not be able to locate the information to scale fonts.

No. Follow the steps below to install the HP Fonts folder.

To install the HP Fonts folder, follow these steps. If you use more than one hard disk as a startup disk, repeat the process for each hard disk you use.



1. Drag the HP Fonts folder icon from HP PrintKit Disk 1 to the System folder on your hard disk.

2. When you have installed the HP Fonts folder on your hard disk(s), eject HP PrintKit Disk 1 by dragging the disk icon to the Trash.

The Color PrintKit Outline Fonts

The HP PrintKit Disks 2 and 3 contain the scalable outline font files that are designed to give you the best quality text appearance on your output.

The printer outline font files include 13 scalable, high-quality fonts from four font families: CS Times, CS Triumvirate, CS Symbol, and CS Courier. CS Times, CS Triumvirate, and CS Courier are available in Roman, Bold, Italic, and Bold Italic. CS Symbol is available in Roman only. Samples of the printer outline fonts are given in the next section. These outline fonts correspond in appearance to the Macintosh screen fonts as follows:

Outline Font Name	Screen Font Name
CS Times	Times
CS Triumvirate	Helvetica
CS Courier	Courier
CS Symbol	Symbol

When you create a document using one of the screen fonts listed above and select the "High Quality Fonts" special effect in the Page Setup dialog, the corresponding outline font will be printed on your output. For example, if you create a document using the Times screen font, the CS Times outline font will print. These printer outline fonts are designed to provide you with high print resolution on your output when you select the screen fonts listed. Refer to "A Word About the Page Setup Dialog" in chapter 2 of this user's guide for more information on the special effect mentioned.

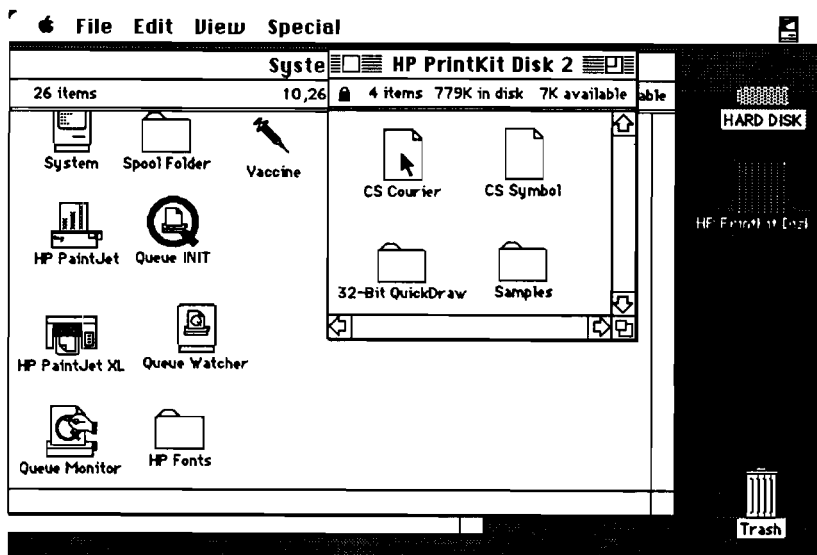
For each outline font family you will use, you will need to install the corresponding screen font. As long as a screen font and a corresponding outline font are present, the printer resource can scale the printer outline font to any size you want to print (up to 250 points). Refer to "Installing the Screen Fonts" later in this chapter for directions to install screen fonts.

Installing the Outline Font Files

For each font family you plan to use, you will need to install that family's outline font file into the HP Fonts (or DeskWriter Fonts) folder in the System folder on your hard disk.

The steps below use installing the CS Courier outline font file as an example. The procedure is the same for each outline font file. If you use more than one hard disk as a startup disk, repeat this process for each hard disk you use.

1. **Insert HP PrintKit Disk 2 into the disk drive; it will open automatically.**
2. **Drag the CS Courier outline font file from HP PrintKit Disk 2 to the HP Fonts folder in the System folder on your hard disk.**



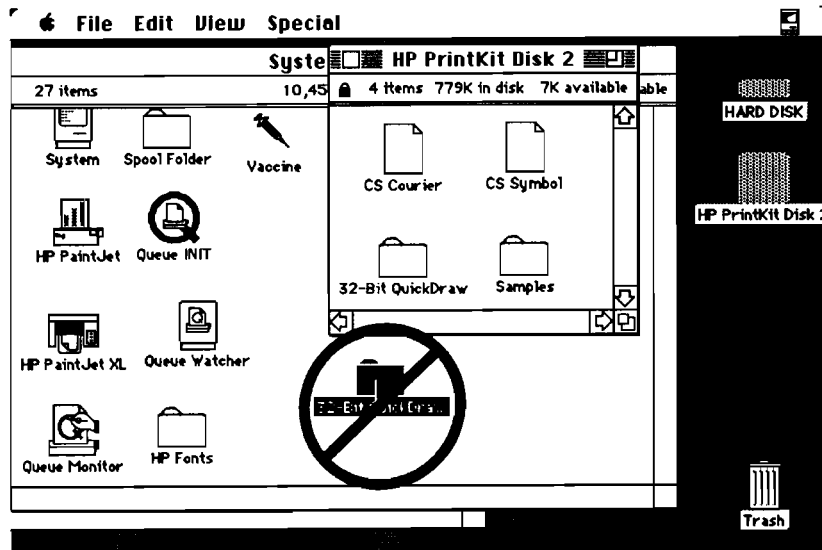
3. **Repeat this process to install the CS Symbol outline font file.**

4. When you have finished installing the outline font files, install 32-Bit QuickDraw using the instructions in the next section.

If you are not going to install 32-Bit QuickDraw, eject PrintKit Disk 2 from the disk drive by dragging its icon to the Trash.

Important

Do not install 32-Bit QuickDraw by dragging its folder to your System Folder.



Repeat these steps to install the remaining outline font files from the HP PrintKit Disk 3.

To see samples of the HP Color PrintKit fonts, refer to "Using Your HP Color PrintKit Fonts" in chapter 3.

If you will be printing screen fonts which do not have corresponding printer outline fonts available, refer to appendix C, "Using Other Vendor's Fonts".

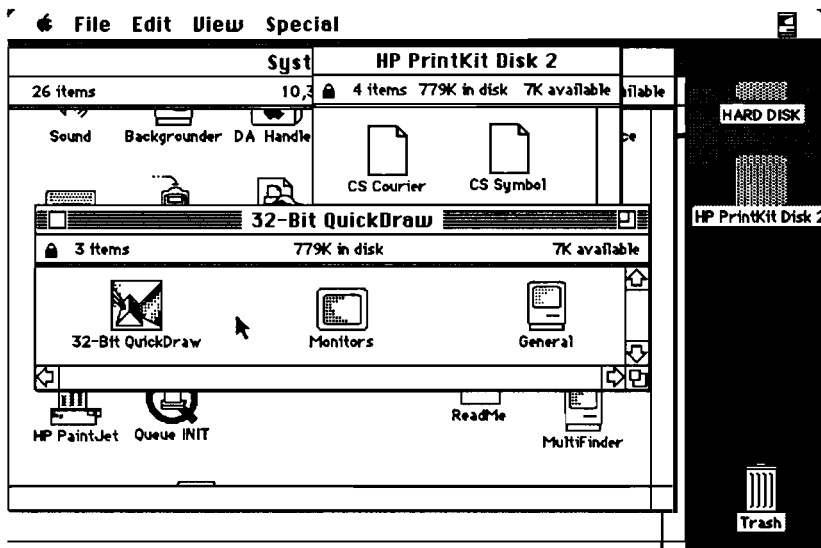
Installing 32-Bit QuickDraw

1. Insert the HP PrintKit Disk 2 into the disk drive; it will open automatically.
2. Open the 32-Bit QuickDraw folder.



32-Bit QuickDraw

1



Because of the additional colors provided by 32-Bit QuickDraw, you need to install updates to the General and Monitors control panel devices.

3. Drag the 32-Bit QuickDraw icon from the 32-Bit QuickDraw folder on your HP PrintKit Disk 2 to the System Folder on your hard disk.
4. Repeat this process to install the Monitors and General control panel devices.

If your System Folder already contains earlier versions of the General and Monitors control panel devices, an alert message will ask whether you want to replace items with the same name. Click **OK**.

The Screen Fonts

Your HP Color PrintKit comes with a set of screen fonts which correspond in appearance to the outline fonts as shown:

Screen Font Name	Outline Font Name
Times	CS Times
Helvetica	CS Triumvirate
Courier	CS Courier
Symbol	CS Symbol

Since these screen fonts are supplied with every Macintosh computer, you may already have installed them. You will need to install these screen fonts *only* if you have *not* already installed them on your system.

If the space on your hard disk is limited, you may want to install only one size of each screen font family you will commonly use. This will allow you to view the appropriate font on your screen, but at a lesser quality than the printed version. As long as you have installed at least one point size for a screen font and its corresponding printer outline font, the printer resource can scale the printer outline font to any other size you may want to print (up to 250 point). If space is not a problem, you may want to install all of the screen font families and sizes provided. Refer to chapter 4, "Maximizing Printer Performance", for information on freeing hard disk space.

Installing the Screen Fonts

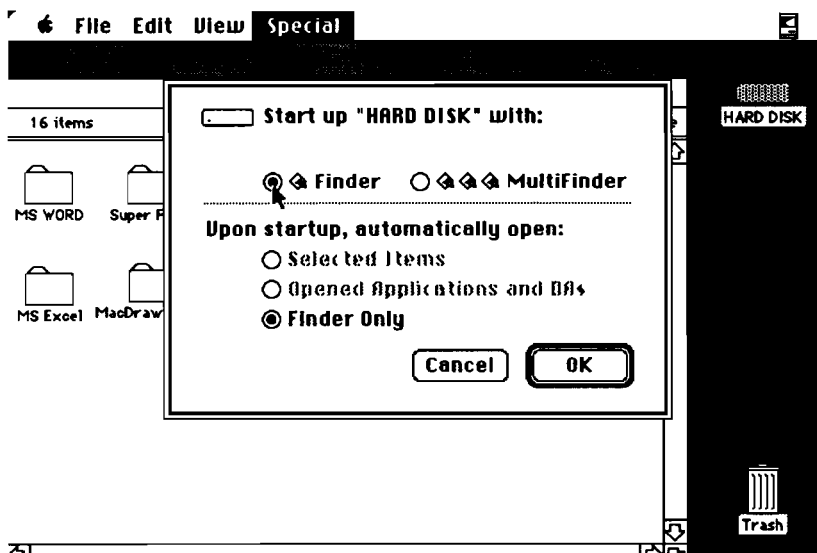
You will use the Font/DA Mover to install the screen fonts in your System file.

Before you begin, you should duplicate your System file in case a problem should occur during the installation process, or if you unintentionally remove or delete fonts. Remember, removal of fonts and desk accessories is permanent. Refer to your Macintosh System Software User's Guide if you need information on duplicating your current System file. Once you have successfully completed the font installation process, be sure to delete the duplicate System file from your hard disk.

1

The following procedure uses the Courier screen font as an example. The procedure is the same for each screen font you want to install. Repeat this process for each startup disk.

1. **If you are working under MultiFinder, restart your computer under Finder before you use the Font/DA Mover.**
 - a. Choose Set Startup from the Special menu and click the Finder button in the Set Startup dialog. (Be sure that the Installation Disk icon on the Macintosh desktop is not selected when you do this.)



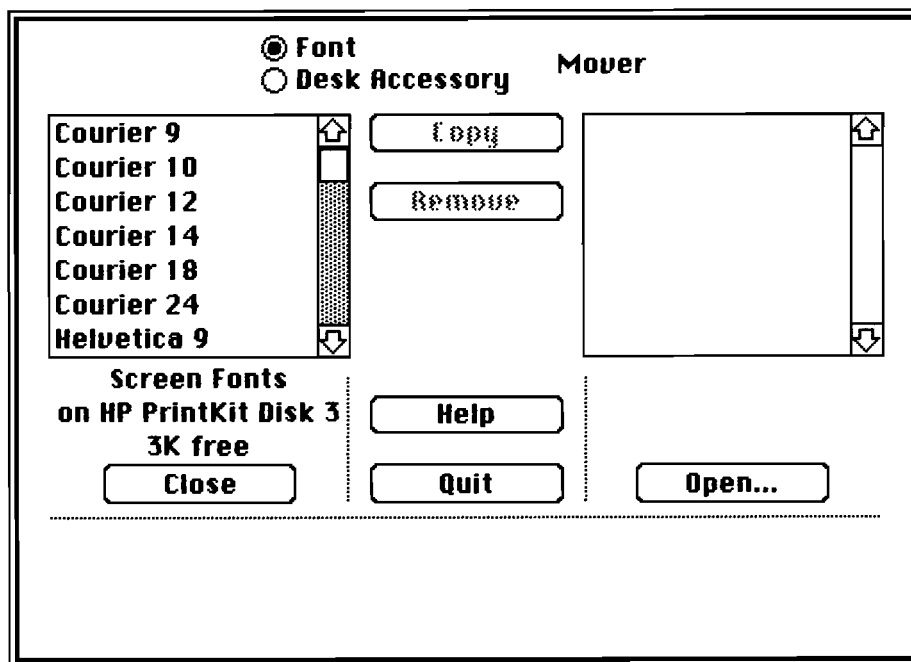
- b. Click the OK button to close the Set Startup dialog.
- c. Then choose Restart from the Special menu to restart your computer under Finder.

2. Insert HP PrintKit Disk 3; it will open automatically.
3. Open the Screen Fonts file by double-clicking the icon.



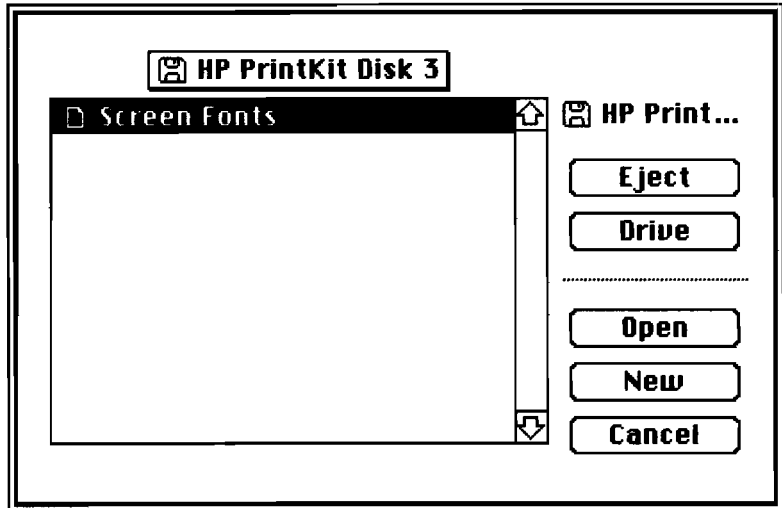
Screen Fonts

Opening the Screen Fonts file automatically opens the Font/DA Mover. All fonts contained in the Screen Fonts file are listed on the left side of the Font/DA Mover. The list on the right side of the Font/DA Mover is empty.



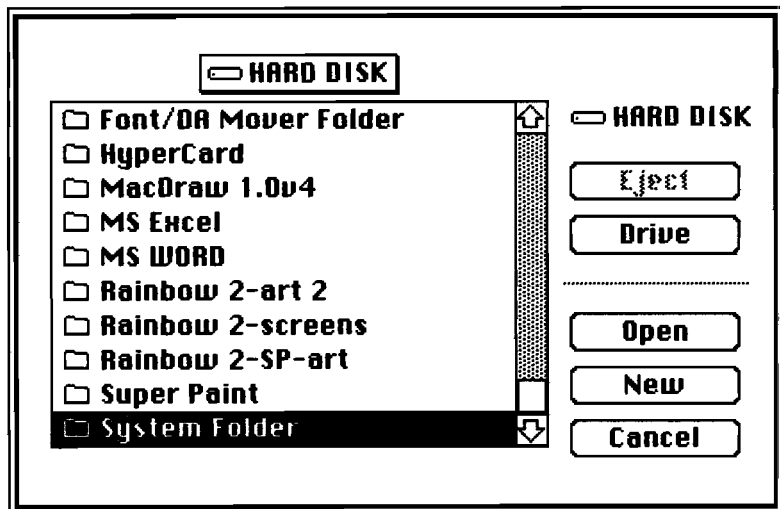
3. Click the Open button below the empty list on the right to open it.

A dialog box will appear listing the files located on the HP PrintKit Disk 3.

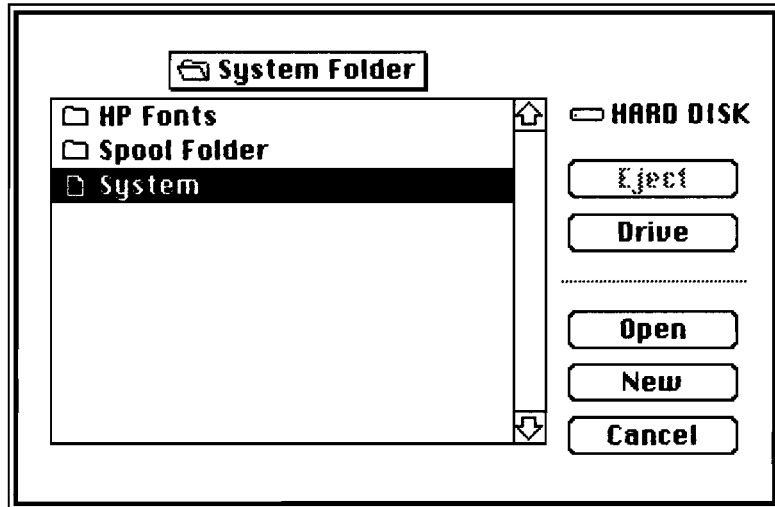


1

4. Click the Drive button to display a list of the files on your hard disk.
5. Select the System Folder by clicking the name or icon and open it by clicking the Open button.

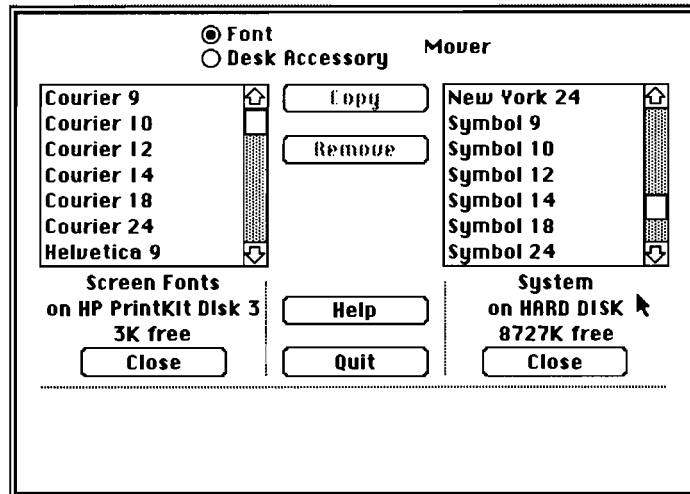


The list of files in the System Folder will display.



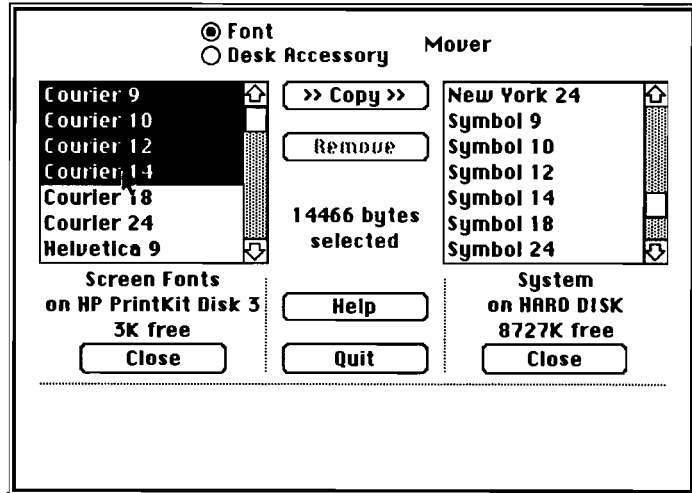
6. **Select the System file by clicking the name or icon and open it by clicking the Open button.**

At this point, the dialog box will disappear and the list on the right side of the Font/DA Mover will show the screen fonts currently installed on the System file of the hard disk.



To select nonadjacent fonts, press the shift key and click each font.

7. Select the screen fonts and sizes you want to install into your System file by pressing the shift key and dragging through the list of font names on the *LEFT*.



8. Click the Copy button to copy the selected fonts from the Screen Fonts file to the System file.
Any font with the same name and of the same point size will be replaced by the new font with the same name and point size.
9. If you have installed all the fonts that you want at this time, click the Quit button to close the Font/DA Mover.

You have finished installing your HP Color PrintKit software.





Using Your PaintJet Series Printer

Now that your PaintJet Series printer is connected to your Macintosh computer and the printer resource files and fonts are installed, your printer is ready for use.

This chapter contains information on selecting the PaintJet or PaintJet XL printer through the Chooser and using the print options provided to customize the page layout and print specifications for your documents.

The chapter also contains information on using the background printing option. Included are instructions for using the following dialog boxes.

- Chooser
- Page Setup
- Page Setup Options
- Print
- Preview
- Queue Monitor

About the PaintJet and PaintJet XL Printers

The dialog boxes for the HP PaintJet and PaintJet XL printers are almost identical. The only difference in the dialog boxes between the two printers relates to the size of the paper: the HP PaintJet printer can use letter size in single sheets or continuous fanfold paper. The HP PaintJet XL can use letter size or tabloid size. Unlike the HP PaintJet printer, the PaintJet XL cannot use continuous fanfold paper.

A Word About the Chooser

Before you print any documents, you must specify which printer you want to use. This is done using the Chooser, a Macintosh desk accessory that allows you to select the printer and the port to which it is connected.

Important

If you want to use background printing, you select it using the Chooser.

You *must* be running under MultiFinder.

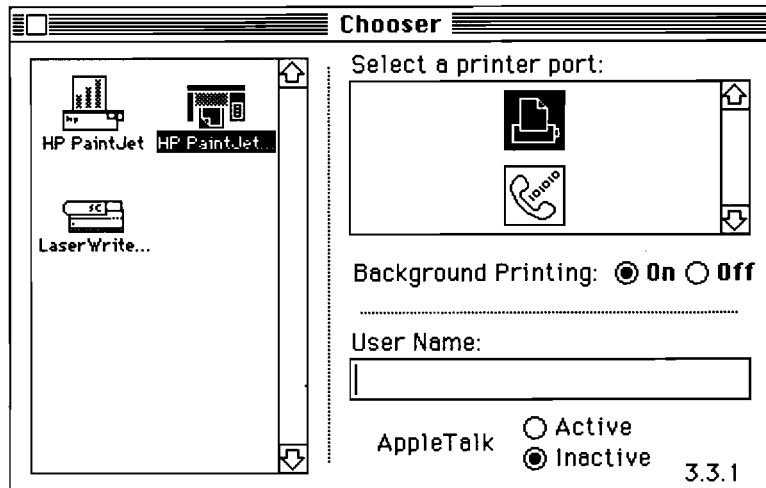
Use the Chooser to select your printer and port before you start any applications.

To select your printer through the Chooser, follow these steps:

1. **Choose the Chooser from the Apple menu on your Macintosh desktop.**
2. **Select the PaintJet or PaintJet XL printer resource by clicking its icon in the left side of the dialog.**

Important

Because the Chooser doesn't have enough room to display HP PaintJet XL, the icon is labeled "HP PaintJet...".



3. **Select the port to which you connected your printer in the select box labeled "Select a printer port:"**

Click the printer port icon if you connected your printer to the printer port on the computer.

Click the modem port icon if you connected your printer to the modem port on the computer.

4. **Select AppleTalk Inactive if you connected your printer to the printer port. You may select either AppleTalk Active or Inactive if you connected your printer to the modem port.**

Important

Your PaintJet Series printer does not support AppleTalk. If you are using Appletalk with another device, you must connect your PaintJet Series printer to the modem port.

Background Printing will not be available unless you started under MultiFinder.

5. **Select Background Printing on or off by clicking the appropriate button.**

Refer to "Background Printing" later in this chapter for details on this option.

6. **Close the Chooser by clicking the Close box in the upper left corner of the Chooser window.**

Once you have completed these steps, the settings you selected will remain on until you reset them using the same process.

Using the Page Setup Dialog

The Page Setup dialog displays when you choose Page Setup from the File menu. Use this dialog to set up the layout of your pages.

You can use the Page Setup dialog to select:

- paper type and size
- reduction or enlargement
- orientation
- special effects

Important

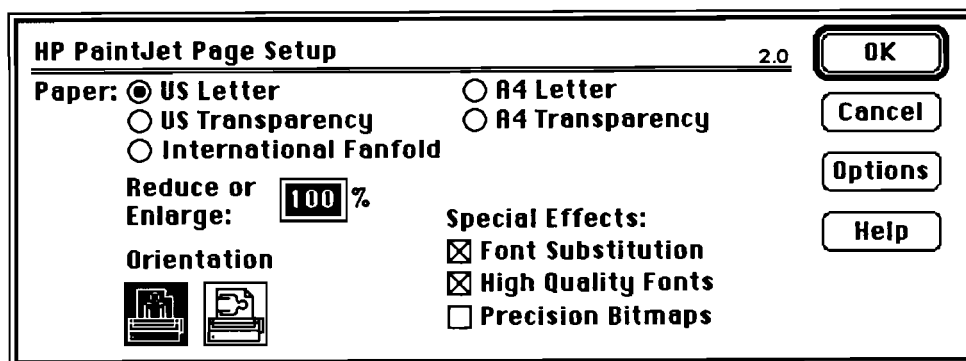
In some applications, including Microsoft Word 3.02, you access the Page Setup and Print dialogs differently from what is described here. Also, some applications expand the PaintJet dialogs to include additional options. See the Read Me file on Disk #1 for details.

You should also use the Page Setup dialog after changing printers to confirm that page layouts will be correct for your PaintJet or PaintJet XL.

The settings shown are preset when the printer resource is shipped. Your applications may not retain these preset conditions.

Page Setup Dialog

PaintJet





Page Setup Dialog

PaintJet XL

HP PaintJet HL Page Setup 2.0

Paper: US Letter A4 Letter
 US Tabloid A3 Tabloid
 US Transparency A4 Transparency

Reduce or Enlarge: %

Orientation
 

Special Effects:
 Font Substitution
 High Quality Fonts
 Precision Bitmaps

2

Paper

Select the paper size and type that reflects the actual size of your media by clicking the appropriate button:

PaintJet

US Letter is also called
A-size media.

US Letter:	8.5 x 11 in.
US Transparency:	8.4 x 11 in. (plus 1 in. leader)
International Fanfold:	210 x 305 mm (8.27 x 12 in.)
A4 (ISO):	210 x 297 mm
A4 (ISO) Transparency:	210 x 297 mm (plus 1 in. leader)

PaintJet XL

US Tabloid is also called
B-size media.

US Letter:	8.5 x 11 in.
US Tabloid:	11 x 17 in.
US Transparency:	8.4 x 11 in. (plus 1 in. leader)
A4 (ISO):	210 x 297 mm
A3 (ISO) Tabloid:	297 x 420 mm
A4 (ISO) Transparency:	210 x 297 mm (plus 1 in. leader)

Caution

Do not try to print on envelopes and address labels; they are likely to become jammed and could damage the printer.

Reduce or Enlarge

Using Reduce or Enlarge will disable Match LaserWriter Print Area.

If you want to print your document larger or smaller, enter a reduction or enlargement percentage. The range for reduction or enlargement is 25 to 400 percent.

1. **Click the percentage box.**
2. **Backspace to erase the current percent then enter the new percent.**

Important

If you use the Precision Bitmaps special effect (covered later in this chapter), your printed image will be reduced an additional 20% over whatever you enter here.

To get the best results from Precision Bitmaps, you need to enter the Reduce or Enlarge factor as a multiple of 50 (e.g., 50, 100, 150, etc.).

Orientation

Orientation determines how your picture will be positioned on the page.



Portrait orients the picture vertically, using the short sides of the paper as the top and bottom of the page.

Using Landscape disables Draft quality printing



Landscape (or sideways) uses the longer sides of the paper as the top and bottom of the page.

- **Select the print orientation for your document by clicking the appropriate icon.**

Special Effects

The Special Effects are Font Substitution, High Quality Fonts, and Precision Bitmaps. Select the ones you want by clicking the check boxes.

Important

Font Substitution and High Quality Fonts have very complex interactions. Be sure to read all three of the following sections: "Font Substitution", "High Quality Fonts", and "Interactions Between Font Substitution and High Quality Fonts".

Font Substitution

Font Substitution prints bitmapped fonts similar to Apple LaserWriter fonts when you select corresponding screen fonts in your document.

High Quality Fonts causes a further substitution. Be sure to read the next two sections to understand this interaction.

With Font Substitution off, the screen fonts themselves are printed. This may produce text with jagged edges, but the printed fonts match the fonts on the screen. Refer to appendix C to learn how the printer resource prints with bitmapped screen fonts.

When Font Substitution is on, fonts are substituted as follows:

If you know you are going to want the Helvetica, Times, or Courier fonts to print on your output, you should select those fonts in your document.

Font Selected in Document	Bitmapped Font Printed
New York	Times
Geneva	Helvetica
Monaco	Courier

For example, if you created a document using the New York font, the bitmapped Times font will appear on your output.

Important

Some programs use a character spacing method called "fractional widths". If your program uses fractional widths, font substitution will *not occur* – regardless of the setting in the check box.

Your software documentation may not tell you that it uses fractional widths; conversely, it may allow you to turn fractional widths off. Some programs that use fractional widths are Aldus PageMaker, Microsoft Word 4.0, MacDraw II, MacWrite, PowerPoint, QuarkXPress, Canvas, and Cricket Presents.

High-Quality Fonts

When this effect is selected the PaintJet Series printer will substitute the high-quality outline printer fonts you received with your Color PrintKit for the bitmapped fonts selected in your document. The substitution is as follows:

Font Selected in Document	Outline Font Printed
Times	CS Times
Helvetica	CS Triumvirate
Courier	CS Courier
Symbol	CS Symbol

If you have purchased additional outline fonts, refer to their documentation to learn what substitutions will occur.

Important

If you know you are going to want the outline printer fonts to print on your output, you should select Helvetica, Times, or Courier fonts in your document even if Font Substitution is on.

If you are using an application that uses fractional widths, Font Substitution will not occur, regardless of the setting in the check box. Refer to the "Font Substitution" section earlier in this chapter for details.

If you choose to print a bitmapped screen font that does not have a corresponding printer font available, refer to appendix C, "Using Other Vendor's Fonts", for hints on getting the best quality output.

Interactions Between Font Substitution and High Quality Fonts

The table on the next page shows what fonts are actually printed versus the fonts selected in the document when different combinations of these two special effects are selected.

Important

Remember, Font Substitution will not work if your program is using fractional widths for character spacing.

Font Selected In Document	Font Printed on Output			
	Font Substitution High Quality Fonts OFF	Font Substitution High Quality Fonts ON	Font Substitution High Quality Fonts OFF	Font Substitution High Quality Fonts ON
New York	this is New York	this is Times	this is New York	this is CS Times
Geneva	this is Geneva	this is Helvetica	this is Geneva	this is CS Triumvirate
Monaco	this is Monaco	this is Courier	this is Monaco	this is CS Courier
Times	this is Times	this is Times	this is CS Times	this is CS Times
Helvetica	this is Helvetica	this is Helvetica	this is CS Triumvirate	this is CS Triumvirate
Symbol	τησ ισ Σψμβολ	τησ ισ Σψμβολ	τησ ισ ΧΣ Σψμβολ	τησ ισ ΧΣ Σψμβολ
Courier	this is Courier	this is Courier	this is CS Courier	this is CS Courier

Precision Bitmaps

This special effect eliminates the minor distortions which may appear in printed bitmap images by reducing the printed image size by 20%. This smooths out uneven lines caused by the difference between the screen resolution and the print resolution.

Important

Precision Bitmaps reduces the printed image size by an additional 20% over the factor you entered in the Reduce or Enlarge box.

If the Reduce or Enlarge factor is not a multiple of 50% (e.g., 50%, 100%, etc.), minor distortions will still occur.

Precision Bitmaps maps the screen image to the printer. Each graphics pixel on the screen is mapped to a group of pixels on the printer. The size of the group of printer pixels is determined by the Reduce or Enlarge factor. Refer to the table below for examples.

Reduce or Enlarge Factor	Printer Pixel Group
50%	1-by-1
100%	2-by-2
150%	3-by-3

When Precision Bitmaps is selected, fonts are printed using outline printer fonts if High Quality Fonts is selected, otherwise the bitmapped screen fonts are used. The fonts are also reduced to match the graphics.



Buttons in the Page Setup Dialog



OK accepts the current settings in the Page Setup dialog and returns to the previous screen.



Cancel ignores any changes you made to the dialog and returns to the previous screen.



Options displays the Options dialog containing Color and Margin settings. Continue reading for details on the Options dialog.



Help displays information about the settings in the Page Setup dialog.

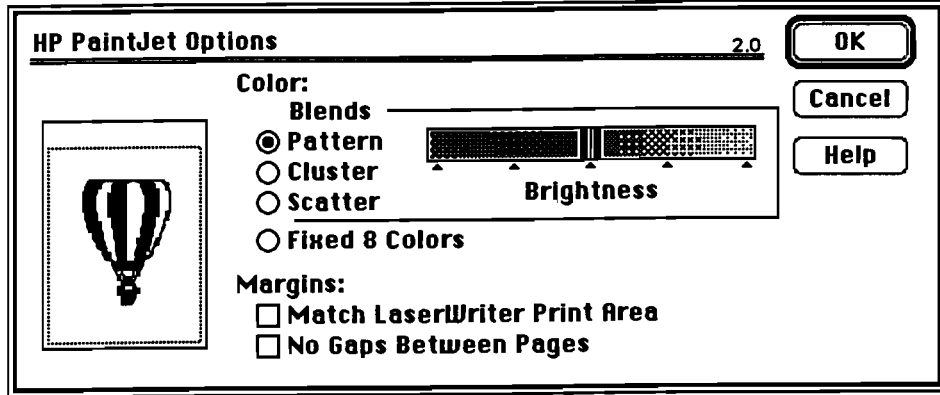


Using the Page Setup Options Dialog

To access this dialog, pull down the File menu and choose Page Setup. Click the Options button in the Page Setup dialog:

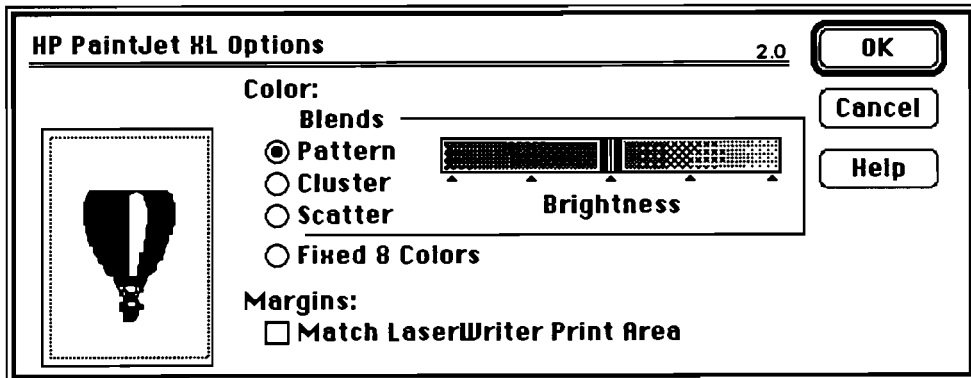
Page Setup Options

PaintJet



Page Setup Options

PaintJet XL



Blends

You cannot select a Blend if you are using Fixed 8 Colors.

Your PaintJet Series printer uses three primary colors plus black to create eight basic colors that can be printed as a single dot.

Red
Green
Blue
Black

Cyan
Magenta
Yellow
White

All other colors are produced by blending these eight colors using blending or "dithering" techniques. You can select one of three blending techniques to blend colors. The blending technique becomes important when you want to show a change from one color to another. Each technique produces a slightly different pattern of color dots. Depending on the application and document, one technique will often produce better results than the other two.

- § *Hint:* Try all three techniques and select the method that is best for your application.
- **Pattern** – Produces a uniform distribution of the basic colors. Will sometimes produce noticeable geometric patterns.
 - **Cluster** – Clusters dots of the basic colors. Sometimes gives lower contrast than the other blending techniques.
 - **Scatter** – Uses an algorithm to give the appearance of a random distribution of the basic color dots. Will often be better for "photographic" images. Scatter will take longer to print than the other blending techniques.

Brightness

You cannot change Brightness if you are using Fixed 8 Colors.

Brightness will have no effect in an 8-color application such as Excel.

When you select one of the three blending techniques, you also have control over the Brightness. Adjust the Brightness slider to the right to lighten your image; adjust it to the left to darken the image.

This control adds or subtracts white to *blended* colors to change them. Because the eight *basic* colors (cyan, magenta, yellow, red, blue, green, black, and white) are formed by single dots of that color, the Brightness selection HAS NO EFFECT on them.

Since blended colors are created by mixing dots of the eight basic colors, changing the Brightness can produce a change in hue (e.g., orange may appear more yellow due to the additional white dots). Refer to "Working With Color" in chapter 3 for more information.

§ *Hint:* You may find that certain settings work for an entire application.

Important

If you have a non fixed 8 color graphic on the same page as a fixed 8 color graphic, the shades of the colors in the fixed 8 color graphic will be noticeably changed. You may need to use the Brightness control to lighten the colors. Refer to appendix A for the exact RGB translations.

Fixed 8 Colors

Select Fixed 8 Colors when you need saturated colors or when your application only supports eight colors. The printer will use the basic eight colors:

Saturated means that each pixel is the basic color; for example, in a saturated yellow every pixel is yellow.

Red	Green	Blue	Yellow
Cyan	Magenta	Black	White

§ *Hint:* Select Fixed 8 Colors only if you are running a non-color QuickDraw application on a color QuickDraw computer.

Important

If you have a non fixed 8 color graphic on the same page as a fixed 8 color graphic, the shades of the colors in the fixed 8 color graphic will be noticeably changed. You may need to use the brightness control to lighten the colors. Refer to appendix A for the exact RGB translations.

On the Macintosh Plus, Portable, and SE models, only the eight basic colors are available for printing. The Fixed 8 Colors option will automatically be selected. The printer resource will print any of these eight colors used by your application.

Some 8-color applications allow you to edit the colors, thus producing more than 8. Read "Working With Colors" in chapter 3 for more information.

Margins

If you entered a value other than 100 in the Reduce or Enlarge box on the Page Setup dialog, Match LaserWriter Print Area will be disabled.

- **Match LaserWriter Print Area** – Allows you to print documents on a PaintJet Series printer that you created for an Apple LaserWriter. The PaintJet Series printer uses the same print area as the LaserWriter would, so you don't need to reformat the document.

You can also select Match LaserWriter before creating documents for the PaintJet Series printer that you also intend to print on a LaserWriter. This eliminates reformatting for the LaserWriter.

Important

Please read "Working With Margins" in chapter 3 for important information on how this option interacts with margin settings.

PaintJet only

You can use Match LaserWriter Print Area only if you are using continuous paper or US or A4 transparency film.

If you do print a document formatted for the LaserWriter on the PaintJet using single sheet paper, try printing it using Precision Bitmaps.

PaintJet XL only

Match LaserWriter Print Area does not support A3 Tabloid paper size.

PaintJet only

- **No Gaps Between Pages** – Expands the printing area of continuous paper to include the top and bottom margins. This option is only available on the PaintJet Printer.

The PaintJet printer's default top margin is 1.25 inches. If you use a smaller top margin in your document, select No Gaps Between Pages. The printer advances to the next perforation before starting to print. You could, for example, use this option to print banners.

Since No Gaps enables you to print with no top and bottom margins, it disables Hand Feed in the Print dialog. No Gaps is unavailable if you selected US or A4 Transparency in the Page Setup dialog.

- § *Remember:* You can use No Gaps Between Pages only when printing on continuous paper.

Buttons in the Options Dialog



OK accepts the current settings in the Options dialog and returns you to the Page Setup dialog.



Cancel ignores any changes you made to the dialog and returns you to the previous screen.



Help displays information about each of the settings in the Page Setup Options dialog.

Using the Print Dialog

Once you have made your print orientation and layout selections through the Page Setup dialog, you are ready to establish your print options for your document. The Print dialog allows you to set the print quality, number of copies, and page range for your document. Choose Print from the File menu to display the Print dialog.

Print Dialog

PaintJet

HP PaintJet		2.0	OK
Quality:	<input checked="" type="radio"/> Best (Single Pass) <input type="radio"/> Faster <input type="radio"/> Draft		Cancel
	<input type="radio"/> Double Pass Best		Preview
Copies:	<input type="text" value="1"/> Pages: <input checked="" type="radio"/> All <input type="radio"/> From: <input type="text"/> To: <input type="text"/>		Help
Paper Feed:	<input checked="" type="radio"/> Automatic <input type="radio"/> Hand Feed		

Print Dialog

PaintJet XL

HP PaintJet XL		2.0	OK
Quality:	<input checked="" type="radio"/> Best (Single Pass) <input type="radio"/> Faster <input type="radio"/> Draft		Cancel
	<input type="radio"/> Double Pass Best		Preview
Copies:	<input type="text" value="1"/> Pages: <input checked="" type="radio"/> All <input type="radio"/> From: <input type="text"/> To: <input type="text"/>		Help
Paper Feed:	<input checked="" type="radio"/> Automatic <input type="radio"/> Hand Feed		
	<input checked="" type="checkbox"/> Print Back to Front		

Faster and Draft are both disabled by some applications.

Draft is also disabled by landscape orientation or if background printing is on.

Important

PaintJet only

PaintJet XL only

Quality

Select the print quality you want.

- **Best (Single Pass):** High quality, 180 dpi output appropriate for almost all situations.
- **Faster:** Trades quality for speed, prints at 90 dpi, but still prints color and graphics.
- **Draft:** Uses the printer's built-in fonts and does not print graphics.

If Background Printing is on, Draft mode is unavailable.

Text will be printed in black.

Text in the 6 basic colors will be printed in color.

- **Double Pass Best:** Produces presentation quality output and eliminates the banding effect sometimes seen in solid areas and occasional misalignment of text characters and vertical lines. Printing will be somewhat slower.

Copies

Select the number of copies you want by entering the appropriate number. You may enter any number from 1 to 9999 as the number of copies to print.

Pages

"All" is the default setting for the Pages to print. This setting will print the entire document. If you want to select a range of pages to print, click the From/To button and enter the page numbers of the range of pages you want to print.

Paper Feed

Select the paper feeding method you want to use, and, if you're using a PaintJet XL, whether you want the pages to print back to front.

- Automatic
- Hand Feed
- Print Back to Front

PaintJet XL only

When back to front is checked, the printer will print your document in reverse order (from last to first page). This causes your document to be in page number order (last page on the bottom, first page on the top) after printing. Some software application packages also offer this option. For those software application packages, the following will occur.

- If neither back to front option is selected, the document will print from first to last page.
- If either back to front option is selected, the document will print from last to first page.
- If both back to front options are selected, the document will print from first to last page as the options cancel each other out.

Buttons in the Print Dialog



OK accepts the current settings in the Print dialog and starts printing your document.



Cancel ignores any changes you made to the dialog and returns you to the previous screen without printing.



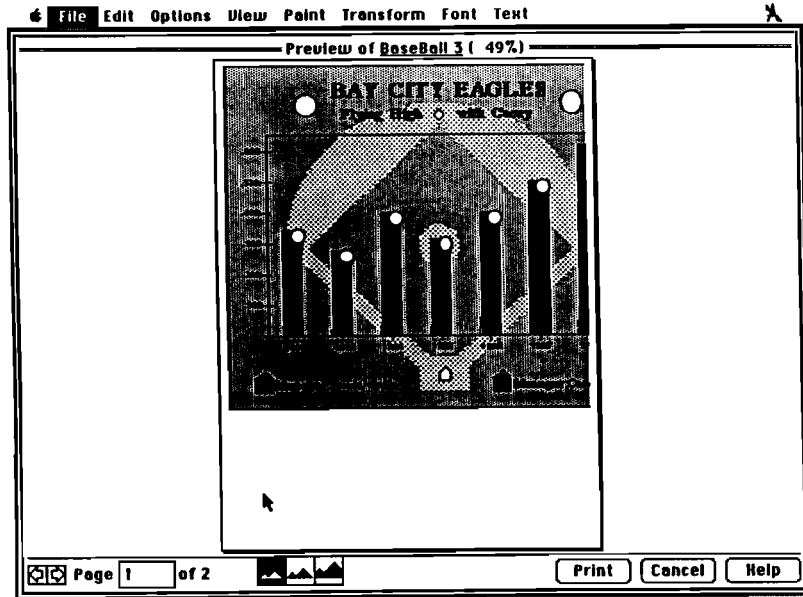
Preview displays the Preview dialog which allows you to see the layout of your document using three levels of magnification.



Help displays information about each of the settings in the Print dialog.

Using the Preview Dialog

When you select Preview from the Print dialog, your document is "printed" to the screen. You can see your document in a full page layout using three levels of magnification: Size-to-Fit Screen, 100%, and Pixel to Pixel. You can also print the currently displayed page of your document from the Preview screen.



Important

If you selected a range of pages on the Print dialog, then only those pages will show in Preview.

Preview Tools



Previous/Next Page lets you view other pages of the page range you set in the Print dialog. Click the left arrow to see the previous page, and the right arrow to see the next page.

To continuously flip pages in either direction, hold the mouse button down on either arrow. The page number is updated as you flip through the pages.

Page of 1

Page Box displays the page number of the currently displayed page.

To go to a specific page, click the word "Page" or the Page box. You are now in "Go To" mode. Type the page number you want and press Return.

2

Palette Boxes

Use any of the three palette boxes at the bottom center of the screen to change the magnification level of the previewed page. You can choose three levels of magnification. Just click a box and the view zooms in or out at the center of the page.

The current magnification level displays to the right of the document title at the top of the preview screen.

Scroll bars are available whenever the entire page is not visible. To scroll, click the arrow that points in the direction you want to view.



Size-to-Fit Screen is the smallest magnification level. It reduces the page to fit entirely in the preview area.



100% changes the view to the size you see when you create your document.



Pixel-to-Pixel is largest magnification level. It enlarges the view so you can see the individual pixels in your document.

Buttons in the Preview Dialog

Print

Print prints the currently displayed preview page.

Important

You can only print the currently displayed page from the Preview dialog. To print the entire document at once, you must return to the Print dialog.

Cancel

Cancel ignores any changes you made to the dialog and returns you to the previous screen.

Help

Help displays information about each of the settings in the Preview dialog.

Background Printing

When Background Printing is on, any time you use the Print command from the File menu, the information to print the document will be saved in the Spool Folder on your startup disk and sent to the printer.

Background printing is also called spooling.

If you send several documents to the printer, the printing information for each will be placed inside the Spool Folder (in your System Folder). Then each document will be printed in order.

§ *By the way:* The information saved in the Spool Folder is not a copy of your document; nor can you manipulate it outside of the Queue Monitor.

Because spooling takes a fraction of the time it takes to print a document, your computer is available for you to use much sooner.

Background Printing will do its job without any action from you. However, the Queue Monitor does provide several additional functions, including:

- Checking the status of printing documents.
- Rearranging the print order of documents.
- Canceling or pausing printing.

Using Background Printing

The Background Printing option uses three files.



Queue INIT



Queue Watcher



Queue Monitor

To use Background Printing:

1. **You must have started under MultiFinder.**
2. **Both Queue Monitor and Queue Watcher must be in the System Folder.**
3. **And, Queue Watcher must be running.**

Queue Watcher checks for files in the Spool Folder, located in your System Folder. When Queue Watcher finds a file in the Spool Folder, it starts Queue Monitor, which does the actual printing.

Queue Monitor prints until the Spool Folder is empty. Using Queue Monitor you can see which file is printing, check or rearrange the order of the files waiting to print, cancel printing, remove a file from the queue, and establish Preferences for the type of alert you want when the printer needs attention.

Launching Queue Watcher

You can launch Queue Watcher either automatically or manually.

§ *Remember:* You can only launch Queue Watcher if you started under MultiFinder.

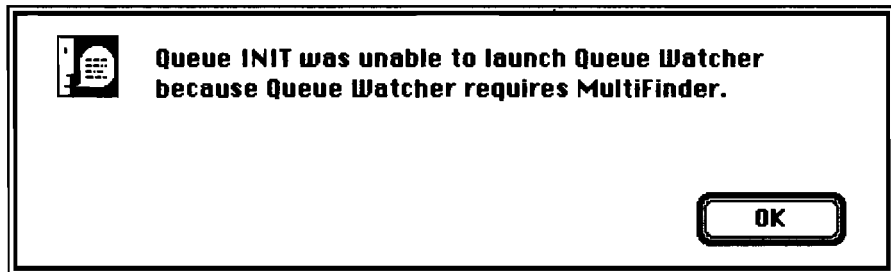
Regardless of how you launch Queue Watcher, the only evidence you will see of it running is that you will be able to select Background Printing in the Chooser.

Automatically

Queue INIT automatically starts Queue Watcher if...

1. **Queue INIT is in the System Folder.**
2. **You started under MultiFinder.**

If you start under Finder, the following alert box will display.



Manually

If you started under MultiFinder, you can manually launch Queue Watcher by double-clicking its icon in the System Folder.

If you started under Finder, an alert box will display.

Using Queue Monitor

Use Queue Monitor to find out which of several spooled documents is printing, to rearrange the order of the documents being printed, and to cancel or resume printing.

Open the Queue Monitor by:

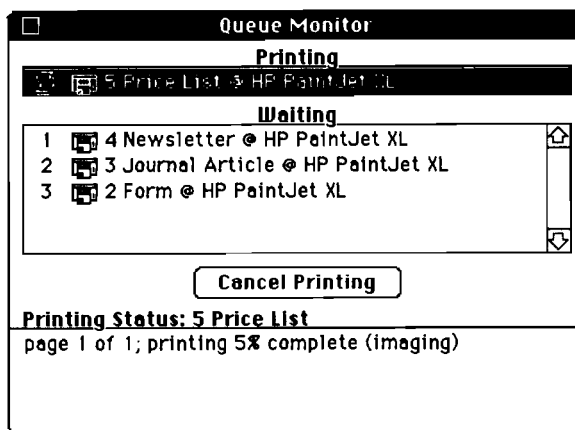
If nothing is printing...

Double-clicking the Queue Monitor icon in the System Folder. Use this method only if you want to change selections in the Preferences menu. You cannot print anything directly from Queue Monitor.

If printing is occurring...

Choosing Queue Monitor from the Apple menu.

The Queue Monitor window will display.



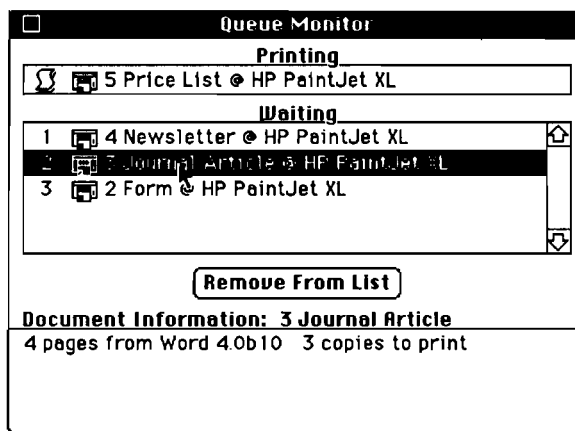
The Queue Monitor window has four sections.

- **Printing** – Tells you the name of the document currently printing and the printer it is printing on.
 - § *By the way:* Queue Monitor reports the name of the printer resource selected in the Chooser, not the physical printer or port to which the data is going.
- **Waiting** – Lists other documents in the Spool Folder waiting to be printed.
- **Cancel Printing/Remove from List Button** – Clicking this button will either cancel printing or remove a document from the Waiting list, depending on which document you've selected.
- **Status Information** – Gives information about the selected document.

Printing

The Printing section tells you the name of the document currently being printed and which printer is being used.

If you select the document in the Printing section, the Status Information section provides Printing Status. This information includes the number of pages, current page being printed, percent of printing complete, and number of copies (if more than one).



To "cancel" printing

Select the document in the Printing section and click the Cancel Printing button.

To "pause" printing

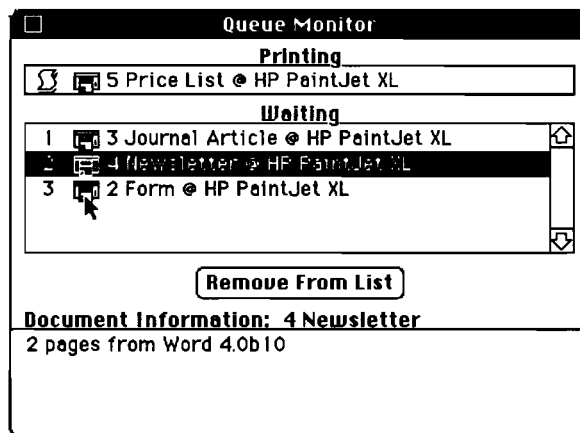
Choose Stop Printing from the File Menu. The message *** Printing stopped by user *** will display in the Printing section. The File menu command will change to Resume Printing; choose Resume Printing to continue.

Important

The Stop Printing command from File Menu stops printing *after* the current document.

Waiting

If you select a document in the Waiting section, the Status Information section provides Document Information. This information includes the number of pages, what program the document is from, and the number of copies to be printed (if more than one).



2

To remove a document

Select the document in the Waiting section and click the Remove From List button.

Shift-click to select multiple documents in the Waiting section.

To reorder documents

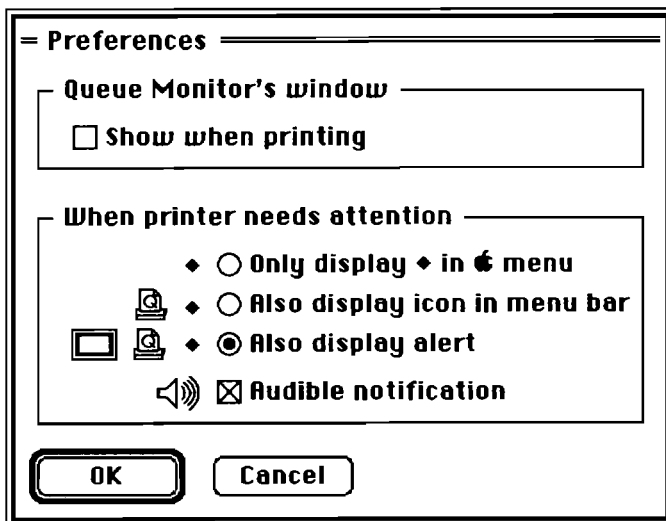
Drag the *icon* of the document you want to move to the new location.

You must drag the icon as dragging other parts of the document name simply moves the highlight.

Establishing Queue Monitor Preferences

The Queue Monitor Preferences allow you to determine whether you want the Queue Monitor window to automatically show when printing and to select the level of notification you get when the printer needs attention.

Choose Preferences from the File menu to display the Preferences dialog.



- Click the **Show When Printing** box to have the Queue Monitor window automatically display in the foreground during printing.
- Click the button in the **When Printer Needs Attention** section to select the level of alert you want.

3

Hints on Printing

In this chapter you will find:

- Using your HP Color PrintKit fonts
- Working with colors
- Working with margins
- Reducing and enlarging
- Printing the best graphics
- Printing best text
- Printing presentation quality documents
- Printing a preliminary copy with color graphics
- Printing draft copies without graphics
- Screen copies



Using Your HP Color PrintKit Fonts

Your Color PrintKit came with four printer font families: CS Courier, CS Times, CS Triumvirate, and CS Symbol. Samples of the 13 scalable printer font outlines from these four font families are shown in 12 point on the next few pages.

CS Courier

CS Courier is a monospaced (also known as fixed pitch) serif font family, very similar to type produced by a typewriter.

abcdefghijklmnopqrstuvwxyz
ABCDEFGHIJKLMNOPQRSTUVWXYZ
0123456789!"#\$%&'*+,-./:=@?
;^_`|~()<>[]{}
ÁÀÃÄÅÇÈÉÊËÌÍÎÏÑÓÔÕÖÙÚÛÜÝÆÇ
áàãäåçèéêëìíîïñóòóôõúûüýæœ
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CS Times

CS Times is a proportionally spaced serif font family. It is very readable and good for documents with long blocks of text.

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Working with Colors

Your HP Color PrintKit works with Apple QuickDraw to provide color imaging. When you installed your software, you noted how many colors your version of QuickDraw will support. However, other factors are involved in working with color.

The Read Me file on PrintKit Disk 1 contains more detailed information about some current applications. *Your software's documentation is the most complete source of information on using color.*

Color Mode. Some applications have Color and Black/White printing modes. Be sure to turn on Color mode in these applications if you are printing documents that contain color. This is usually accomplished through a "send color to printer" command.

Printing Speed. The more complex the images, and the more color you have on a page, the longer it will take to produce your output. If you are working on text or placement of objects in an image, you may want to use "Faster" printing for interim output. You should still get a fair idea of what your color output will look like.

Non Color QuickDraw and Other 8-Color Applications

On Macintosh Plus, SE, and Portable models, only the eight basic colors are available for printing.

Red	Cyan
Green	Magenta
Blue	Yellow
Black	White

The printer resource will print any of these eight colors used by your application. It can also print shades made by editing the colors as described below.

In applications that let you edit and create colors, use combinations of these colors to produce new colors for printing on your PaintJet Series printer. Usually this is accomplished by editing the individual dots of a pattern. For example, you can mix white dots into a color to lighten the shade, or use black to darken it.

The MacDraw II example below shows how red and blue dots are mixed to appear as the color purple.



Color and 32-Bit QuickDraw

The Macintosh II and SE/30 can use Color and 32-Bit QuickDraw.

A Macintosh II can display 16.8 million colors. The printer resource will substitute the closest of the PaintJet's colors for the Macintosh II colors you use in your application. (Some very light colors may print as white.)

Using Color or 32-Bit QuickDraw gives you access to two more options on the Page Setup Options dialog: Color Blends and Brightness.

Color Blending

Your PaintJet Series printer uses three primary colors plus black to create eight basic colors that can be printed as a single dot.

Red	Cyan
Green	Magenta
Blue	Yellow
Black	White

Color blending is also called dithering.

All other colors are produced by blending these eight colors using blending or "dithering" techniques. Your eye cannot distinguish the individual dots of color on a page so the printer mixes dots of different colors and your eyes "sees" another color. By using combinations of the eight basic colors, you can produce any color you want.

You can select one of three blending techniques to blend colors. Each technique produces a slightly different pattern of color dots. Depending on the application and document, one technique will often produce better results than the other two.

The three types of color blending are:

- **Pattern** – Will sometimes produce noticeable geometric patterns.
- **Cluster** – May give lower contrast than the other blending techniques.
- **Scatter** – Will often be better for "photographic" images. Scatter will always take longer to print than the other blending techniques.

You will need to experiment with the different types of color blending to see which suits your application. There are no hard and fast guidelines to follow.

Select the color blending technique on the Options dialog. When you select a blending technique, the texture of the brightness bar will change to reflect the color blend you chose.

§ *Original QuickDraw*: If you have a Macintosh Plus, SE, or Portable, Fixed 8 Colors is automatically selected, and you cannot select a color blend.

Brightness

Brightness determines the amount of white used in the color blend. You can select five Brightness settings using a slider bar in the Options dialog.

Adjust the Brightness slider to the right to lighten your image; adjust it to the left to darken the image. Refer to "Brightness" in chapter 2 for details.

§ *Original QuickDraw*: If you have a Macintosh Plus, SE, or Portable, Fixed 8 Colors is automatically selected, and you cannot use the Brightness bar.

Working With Margins

PaintJet Only

The PaintJet printer has the following built-in margins:

Regular Margins

Paper Size	Top	Bottom	Left	Right
US Letter (in.)	1.25	0.25	0.25	0.25
A4 Letter (mm)	31.8	6.4	4.0	0
US Transparency (in.)	0.25	0.25	0.25	0.15
A4 Transparency (mm)	6.4	6.4	4.0	0
International Fanfold (mm)	31.8	6.4	6.4	0

Match LaserWriter Print Area

Paper Size	Top	Bottom	Left	Right
US Letter (in.)	0.43	0.43	0.42	0.42
A4 Letter (mm)	10.6	10.6	9.9	9.7
US Transparency (in.)	0.43	0.43	0.42	0.42
A4 Transparency (mm)	10.6	10.6	9.9	9.7
International Fanfold (mm)	6.4	6.4	5.3	5.3

PaintJet XL Only

The PaintJet XL printer has the following built-in margins:

Regular Margins

Paper Size	Top	Bottom	Left	Right
US Letter (in.)	0.08	0.19	0.25	0.25
A4 Letter (mm)	2.0	4.9	3.4	3.4
US Tabloid (in.)	0.19	0.19	0.17	0.17
A3 Tabloid (mm)	4.9	4.9	8.5	8.5
US Transparency (in.)	0.18	0.19	0.25	0.15
A4 Transparency (mm)	4.5	4.9	3.4	3.4

Match LaserWriter Print Area

Paper Size	Top	Bottom	Left	Right
US Letter (in.)	0.29	0.29	0.28	0.28
A4 Letter (mm)	7.1	7.1	6.5	6.5
US Tabloid (in.)	0.19	0.19	0.17	0.17
A3 Tabloid (mm)	<i>Not supported</i>			
US Transparency (in.)	0.29	0.29	0.28	0.28
A4 Transparency (mm)	7.1	7.1	6.6	6.5

Your printed margins will vary depending on your application. Some applications will account for the printer's margins and produce the margin you request. Others add the margins you request onto the printer's margins. For example, if you are using a PaintJet printer and set a left margin of 1 inch in your application, you may get a printed margin of either 1 inch or 1.25 inches (your margin setting plus the printer's margin). You may need to experiment with margin or page size settings in your applications to find the best settings for your documents.

PaintJet Only

Continuous Paper

If you want to expand the printing area of continuous paper to include the top and bottom margins, do the following:

- 1. Go to the Page Setup Options Dialog.**
- 2. Select Options.**
- 3. Select Margins: No Gaps Between Pages.**

When you use No Gaps Between Pages, the PaintJet will eject a blank page before printing.

Printing Documents Formatted For the LaserWriter

If you want to print a document created for an Apple LaserWriter, but you don't want to reformat the document, you can match the print area of the LaserWriter by doing the following:

1. **Go to the Page Setup Options Dialog.**
2. **Select Options.**
3. **Select Margins: Match LaserWriter Print Area.**

You cannot use Match LaserWriter Print Area if you enter any value other than 100 in the Reduce or Enlarge box on the Page Setup Options dialog.

PaintJet only

If you are using the PaintJet printer you must use either continuous paper or transparency film to match the print area.

Selecting Match LaserWriter Print Area automatically selects No Gaps Between Pages, therefore the PaintJet will eject a blank page before printing.

PaintJet XL only

The A3 Tabloid paper size is not supported when using this option.

Reducing and Enlarging

You can reduce or enlarge your documents and images from 25 to 400 percent.

Important

Precision Bitmaps *reduces* the image 20% from the Reduce or Enlarge factor that you enter.

To enlarge or reduce your document, do the following:

1. **Go to the Page Setup Dialog.**
2. **Enter the percentage reduction or enlargement desired in the Reduce or Enlarge Box.**
3. **Go to the Print Dialog and select OK to print your document.**

Printing the Best Graphics

Your bitmapped graphics from "paint" applications may sometimes appear jagged or block-like due to the differences between the resolution of the screen and printer. The Precision Bitmaps option prints images at 80 percent of their actual size. This results in a more precise, proportional copy of the screen image. It also improves the appearance of printed screen fonts if you print with High Quality Fonts off.

Object-oriented graphics from "draw" applications achieve the same high output with Precision Bitmaps on or off. (Text quality in these applications is best with High Quality Fonts on.)

Important

Precision Bitmaps *reduces* the image 20% from the Reduce or Enlarge factor that you entered.

To print using Precision Bitmaps, do the following:

1. **Go to the Page Setup Dialog.**
2. **Select Special Effects: Precision Bitmaps.**
3. **Select OK.**
4. **Go to the Print Dialog.**
5. **Select Best (Single Pass) printing.**

Provides the highest resolution output from both painting and drawing applications.

6. **Select OK to print your document.**

Printing Best Text

For the best text output, do the following:

1. **Use Times, Helvetica, Courier, or Symbol screen fonts in your application.**
2. **Go to the Page Setup Dialog.**
3. **Select Special Effects: High Quality Fonts.**
4. **Select OK.**
5. **Go to the Print Dialog.**
6. **Select Best (Single Pass) print quality.**
7. **Select OK to print your document.**

3

Printing Presentation-Quality Documents

To print the highest quality documents, do the following:

1. **Go to the Print Dialog.**
2. **Select Double Pass Best Quality.**
3. **Select OK to print your document.**

Using Double Pass Best quality takes longer to print than Best (Single-Pass) but produces the smoothest colors.

Printing a Preliminary Copy With Color Graphics

To print a preliminary copy with color and graphics, do the following:

1. **Go to the Print Dialog.**
2. **Select Faster Quality.**
3. **Select OK to print your document.**

Printing Draft Copies Without Graphics

If you want to print a draft of your document with text only, do the following:

1. **Go to the Print Dialog.**
2. **Select Draft Quality.**
3. **Select OK to print your document.**

Important

If Background Printing is on, Draft mode is unavailable.

Remember that the printer uses only screen fonts for Draft quality documents and does not print graphics.

PaintJet only

Text will be printed in black.

PaintJet XL only

Text in the 6 basic colors will be printed in color.

Screen Copies

Command-Shift-4

To create a copy of the foremost window on your screen, hold down the Command and Shift keys while pressing the number 4 key (Command-shift-4). The printing produces a copy of the window printed at 20% reduction in Faster mode.

§ *By the way:* If your monitor is color, the screen dump will be color. If your monitor is black and white, the screen dump will be black and white.

Caps Lock + Command-Shift-4

To generate a copy of the entire screen, not just the foremost window, turn on Caps Lock and then press Command-Shift-4. This screen copy is also printed at 20% reduction in Faster mode.

§ *By the way:* If your monitor is color, the screen dump will be color. If your monitor is black and white, the screen dump will be black and white.

Command-Shift-3

Command-Shift-3 creates a MacPaint document (black and white) with the current contents of the entire screen.

Important

If you have a color monitor, turn it to two-color mode before using Command-Shift-3.

The document will be placed on your hard disk and named Screen 0 through Screen 9. If you need more than 10 screens, you will need to rename the first 10 documents.

You can open, print, and manipulate these files in any application that can read MacPaint files; for example, Super Paint and MacWrite.





4

Maximizing Printer Performance

The PaintJet and PaintJet XL printer resources were designed to give you the best possible performance, but the printer output speed can be affected by:

- The amount of system memory available in your Macintosh computer. This is dependent on many different factors, including:
 - Whether you work under Finder or MultiFinder. If you typically work under MultiFinder, this may also depend on the number of applications you have open at a time.
 - The startup screen and number of initialization routines (commonly called "inits") you have stored in the System folder of your hard disk.
 - The number of fonts you have installed in your System file.
 - How fragmented your system memory is.
 - The amount of system memory reserved in the RAM cache.
- The amount of disk space available on your hard disk. This is dependent on many different factors, including:
 - The number of printer resources, documents, desk accessories, and applications stored on your hard disk that you do not frequently use (this is most applicable when your hard disk is getting full).
 - How much disk space is available and how fragmented the disk space is.

This chapter assumes that you are familiar with the Macintosh environment and understand the basics of Macintosh memory management. Before you try the suggestions given in this chapter, we recommend that you review "Some Technical Points About Memory" in chapter 10 of your Macintosh System Software User's Guide for background information on Macintosh memory management.

Purchasing Additional RAM

Probably the most significant increase in printer output speed you can make is by increasing the amount of RAM available for the printer resource to use. If you typically work under MultiFinder and frequently have more than one large application open at a time, at least 2 megabytes of RAM may be required to ensure satisfactory printer performance. See your authorized Apple dealer for information on purchasing and installing additional RAM.

Freeing System Memory

Most techniques for maximizing your printer's performance require freeing Macintosh memory for the printer resource to use. The suggestions given here may help you to improve the printer's output speed.

Printing Under Finder

If you typically work under MultiFinder on a one megabyte computer and your printer output speed seems slow, you may want to try printing under Finder. In almost all cases, switching from MultiFinder to Finder will improve your printer's output speed. To switch from MultiFinder to Finder, follow these steps:

- 1. Close all of your applications and save all of your documents.**
- 2. Choose Set Startup from the Special menu and click the Finder button in the Set Startup dialog. Click the OK button to close the Set Startup dialog.**
- 3. Choose Restart from the Special menu to restart your computer under Finder.**

Printing Under Multifinder

When you are printing under MultiFinder, you may occasionally receive a message indicating that not enough memory is available to print your document. If this occurs, try the following:

1. **If you have several applications open, reduce the number of open applications and try printing again.**
2. **If you are trying to print several documents at a time, reduce the number of documents and try printing again.**
3. **Adjust the size of the application if you are still unable to print. Refer to chapter 10 of your Macintosh *System Software User's Guide* for information on adjusting application memory size.**
4. **Try printing under Finder, rather than under MultiFinder. To turn off MultiFinder, follow the steps in "Printing Under Finder," on the previous page.**

4

Removing Startup Screens and Inits

Removing startup screens and inits from your System folder is another way to make more system memory available for your printer resource to use. Depending on the size of the files, removing one or two of these types of files may not significantly affect your printer's performance speed.

To remove startup screens, inits, and control panel documents, drag them from your System folder.

Adding Fonts

To add more screen fonts to your System file, refer to "Installing Screen Fonts" in chapter 1 of this manual. The procedure is the same for any font you may wish to add. To conserve system memory as you add new screen fonts, keep the following in mind:

- Only one size screen font must be installed for those fonts which have corresponding high-quality printer fonts.
- Only 2.5X fonts must be installed for those fonts which do not have corresponding high-quality printer fonts.

If you will be adding or using screen fonts for which you do not have corresponding high-quality printer fonts, refer to "Using Other Vendor's Fonts" in appendix C of this manual for further information.

Removing Fonts

Removing screen fonts from your System file will make more system memory available for the printer resource to use. If you typically use only a few specific sizes for certain font styles, you may want to remove the sizes that you don't use.

Removing larger point sizes makes more system memory available than removing smaller point sizes. It is important to remember that this is most useful with screen fonts for which you have corresponding outline printer fonts. For these fonts, you will not lose any print quality, since the printer resource can scale the outline printer fonts to virtually any size. For screen fonts you plan to print which have no corresponding outline printer fonts, be sure that you do not remove the 2.5X size of these fonts. Refer to "Using Other Vendor's Fonts," in appendix C of this manual for more information on 2.5X fonts.

Before you begin, remember that removal of fonts and desk accessories is permanent. Be sure to make a backup copy of your System file in case you remove a font or desk accessory you did not intend to, or something goes wrong during the removal process.

1. **Start your Macintosh computer with your hard disk.**
2. **If you are using Multifinder, restart your computer under Finder before you use the Font/DA Mover. To do this, follow the instructions given in "Printing Under Finder," earlier in this chapter.**
3. **Open the Font/DA Mover by double-clicking the icon. The fonts contained on the System file of the hard disk are now listed on the left side of the Font/DA Mover dialog.**
4. **Select the fonts you want to remove by holding down the Shift key while clicking each font name in the list on the left. Be sure you are removing fonts from the System file.**

The Macintosh computer uses Geneva 9 and 12 point, Chicago 12 point, and Monaco 9 point for screen display. These fonts and sizes cannot be removed.

5. **Click the Remove button to remove the selected fonts from the System file on the hard disk. Once you have finished, click the Quit button to close the Font/DA Mover.**

Memory Fragmentation

If you have been working on your computer for several hours, starting and quitting applications, your computer's system memory has probably become fragmented (broken up into small blocks). To understand memory fragmentation, refer to "Fragmented Memory," in chapter 10 of your Macintosh *System Software User's Guide*.

To create an unfragmented block of memory, quit all applications you are currently using, then restart those applications. This will "gather" fragmented system memory, making one large, contiguous block available for your printer resource to use.

RAM Cache in the Control Panel

The RAM cache allows you to reserve some memory where applications can store information for quick retrieval. Turning OFF the RAM cache in the Control Panel increases the amount of system memory available for the printer resource to use.

Unless your software application recommends leaving it on, you can turn OFF the RAM cache by following these steps:

- 1. Choose the Control Panel from the Apple menu.**
- 2. Check to see whether the RAM cache is OFF. If it is not, turn OFF the RAM cache by clicking the OFF button.**
- 3. Choose Restart from the Special menu to restart your computer without the RAM cache.**

Freeing Disk Space

Some color files can need a great deal of disk space to print. Use the following suggestions to free space on your hard disk.

Removing Printer Resources, Applications, and Documents

To maximize the disk space available on your hard disk, you can remove any printer resources, applications, and documents that you don't use frequently. Follow these steps to free additional space on your hard disk.

Before you remove anything from your hard disk, be sure to make backup copies of those items you may need in the future. Refer to your Macintosh System Software User's Guide if you need information on copying files and creating backups.

4

1. **If you plan to use your PaintJet Series printer as your only printer, you will not need any other printer resource in your System folder. Remove unneeded printer resources by opening the System folder icon and dragging them to the Trash.**

If you buy another printer at a later date, you will receive the printer resource with it. We suggest that you copy printer resources to a backup disk before removing them. Be sure to remove only printer resources from the System folder. Do not remove any other files from the System folder.

2. **Remove any documents that you do not use frequently by selecting their icons and dragging them to a backup disk. Once they have been copied to a backup disk, select and drag their icons from your hard disk to the Trash.**

- 3. Remove any applications that you do not use frequently by selecting their icons and dragging them to a backup disk (or disks). Once they have been copied to a backup disk, select and drag their icons from your hard disk to the Trash. An alert box will appear, asking you if you are sure you want to remove the application you have selected. Since you have already copied the application to a backup disk, click the "OK" button.**

Repeat these steps until you have removed all unnecessary files from your hard disks.

Removing Desk Accessories

Removing desk accessories from your System folder will also make more system memory available for your printer resource to use. Removing one or two desk accessories may not significantly affect your printer's performance speed.

- 1. Follow steps 1-3 in "Removing Fonts."**
- 2. Click the Desk Accessories button in the Font/DA Mover. The list of desk accessories installed on the system file will appear.**
- 3. Select the desk accessories you want to remove and click the Remove button. (Remember, removal is permanent.)**

Disk Compaction

The amount of memory required for printing depends, in part, on the size of the document you want to print. Large documents require more space than small documents. Printing is faster when disk space is contiguous. If you have a disk compaction program, run that program before you install the printer resource on your hard disk, following the instructions provided with your disk compaction program. This will "gather" all available space into one contiguous block of unused memory.

5

Troubleshooting

This chapter helps you correct some of the most common problems that can occur in your day-to-day use of the HP Color PrintKit with your PaintJet Series printer.

Alerts and Messages

My Macintosh doesn't tell me the PaintJet XL is offline or not turned on. It thinks the document was printed.

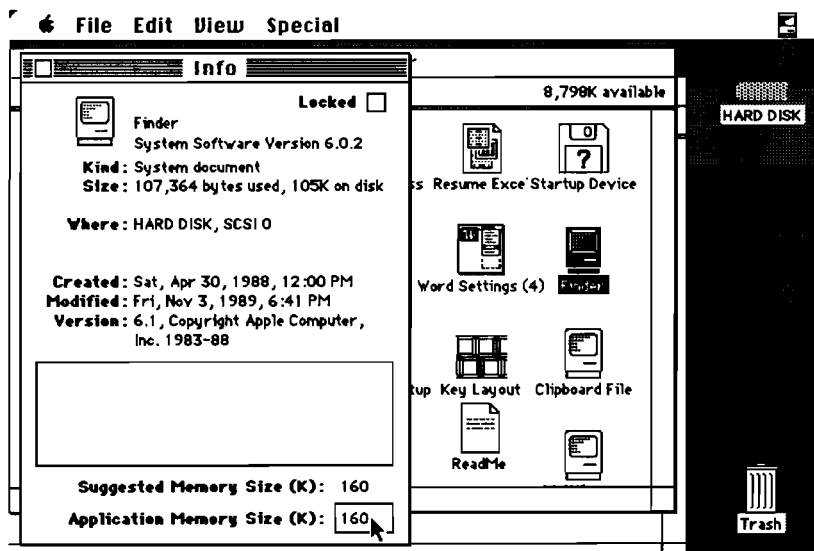
The PaintJet XL must "tell" the Macintosh that it cannot accept more data. Even when the PaintJet XL is off line, it continues to receive data from the computer until its internal buffer is full. Only then does it tell the Macintosh that there's a problem. The time to fill the buffer varies significantly between documents and applications. Also, if the printer is turned off or the RS-232-C cable is disconnected, the Macintosh never knows the printer isn't printing.

I sometimes get an alert that the PaintJet XL is not responding, but I cannot find a problem. I click OK and everything proceeds normally.

Your printer resource has "timed out" because the printer has not kept up with the data sent from the computer. The resource thinks the printer has been busy too long and something must be wrong. This usually occurs when you have pages with either very little text or very simple graphics. The time it takes the PaintJet XL to sheet feed new pages causes it to take more time to respond than the printer resource thinks is "reasonable".

I try to do a screen dump or choose Print Directory from the File menu when running under MultiFinder, and my Macintosh just beeps at me and does nothing.

Increase the Finder's MultiFinder partition size. Open the System Folder, select Finder, then choose Get Info from the File menu.



At the bottom of the information window are two lines:

Suggested Memory Size (K)
Application Memory Size (K)

If you don't see these lines, MultiFinder is not running. Click the box on the Application Memory line and increase the number by 20 or 40. Then Restart your Macintosh.

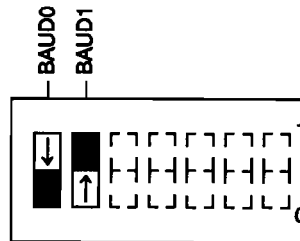
I get an alert saying "Unable to launch Queue Monitor...", but background printing proceeds normally.

You will occasionally get this alert when you print two or more documents in rapid succession and are using background printing. When Queue Watcher sees a new document in the Spool Folder, it checks to see if Queue Monitor is running. If it is not, Queue Watcher launches Queue Monitor. Sometimes Queue Monitor will not have been running long enough to tell Queue Watcher it is on, and Queue Watcher will attempt to launch it again. This generates the alert since, you cannot launch an application that is already running.

Unexpected Output

My PaintJet XL prints nothing or many pages with odd graphics characters in various places.

You probably have the baud rate set to something other than 19 200. To work with the Color PrintKit, your PaintJet XL must be set to 19 200 baud. Refer to the illustration below for the proper switch setting.



These are some other symptoms of possible communication problems:

- after clicking Print, the printer does not print and the computer may seem to be "frozen."
- the computer appears to be sending data, but the printer does not respond.
- "Printer is Not Responding" message appears on your screen.

Read "Alerts and Messages" earlier in this chapter, and refer to your *PaintJet User's Guide* or *PaintJet XL Computer Information* for assistance in resolving communication problems.

I'm having trouble centering my transparencies vertically.

Be sure that you are not trying to compensate for the 1 in. leader on the transparency film. The printer resource does this for you.

When printing on my PaintJet XL the left margin is shifted to the right of where it should be, or the printer cuts off all of my text and graphics before the right margin I specified.

This can occur when you manually feed a sheet of paper and don't insert it exactly straight. If the media is skewed, the printer may erroneously establish a point along the top edge as one of the sides.

I'm using color in my document, but the output is black and white.

You may be using an application that has both color and black and white modes. If so, confirm that color mode is turned on (usually with a "send color to printer" option) and try again.

When I select Fixed 8 Colors, some of my graphics print in black and white.

Your application may print color graphics in more than one way. If it prints by "drawing" objects and specifying their color, QuickDraw will convert each color to the closest of the fixed 8 colors. However, if your application created a *pixmap* (a color bitmap in Color QuickDraw), QuickDraw will convert the information to black and white before printing it in Fixed 8 Colors.

I checked the option in my program that says print black and white only, but some graphics still print in color.

When you import graphics, your current application does not modify them to turn off color detail. It simply sends them on to the printer as a single unit.

When I print in draft mode, none of my graphics appear.

Draft mode uses the printer's built-in fonts and does not print graphics.

When I print a transparency on the PaintJet that I created for the LaserWriter, sometimes part of the image is cut off.

You can achieve the same print area on the PaintJet as on the LaserWriter by using "Match LaserWriter Print Area" in the Page Setup Options dialog. This is only available when you use transparency film or continuous paper, AND you don't reduce your image with the Reduction settings in the Options dialog.

When I print on continuous paper, the printer sometimes advances a full page before printing.

This happens when you select No Gaps Between Pages in the Page Setup Options dialog. This feature allows top margins smaller than 1.25 inches or continuous printing across pages (e.g., banners). To print in the top 1.25 inches of the page, the printer advances your paper to the next perforation before printing. Also, No Gaps Between Pages is automatically selected if you select Match LaserWriter Print Area.

When I print the same color image from a Macintosh II and a Macintosh SE, Plus, or Portable, more colors are printed from the Macintosh II.

The Macintosh SE, Plus, and Portable use the original noncolor QuickDraw which supports only eight colors. The Macintosh II uses new Color QuickDraw and allows you to create, edit, and print 256 colors on the PaintJet Series printers.

The colors printed from my Macintosh II don't match the colors on my screen.

Exact matching of screen colors in printed output is very difficult. First, be sure you have not selected Fixed 8 Colors from the Page Setup Options dialog. If you are already using Blends, try adjusting the Brightness control.

My printed output has blocks or stripes of color that do not appear on the screen.

Be sure that you have not selected Fixed 8 Colors from the Page Setup Options dialog. Next, be sure that you have installed 32-Bit QuickDraw (unless you have a machine that came with it, such as the IIfx). Without 32-Bit QuickDraw, any page of your document that contains more than 256 colors will print using the standard system color palette, *not* the program's color palette.

Print Quality

Print quality will vary with the type of paper you are using. For the best print quality, use HP PaintJet paper, which has been specially coated to complement the ink in the PaintJet print cartridges. With this paper, you will also obtain maximum print cartridge reliability.

When I use large fonts, sometimes the output looks jagged.

Be sure you have checked High Quality Fonts in the Page Setup dialog. If you are printing bitmapped fonts be sure that 2.5X fonts are installed. This can also occur if memory is limited (you will receive an alert message). If memory is limited, turn off MultiFinder and RAM cache and try again.

The edges of the graphics I create in my painting program do not appear smooth when printed.

Try printing the document with Precision Bitmaps selected in the Page Setup Options dialog. This reduces the jagged edges that can occur due to differences between screen and printer resolutions.

When I print transparencies, the image is light and the colors appear washed out.

Make sure you select Transparency Film in the Print dialog. This puts the printer in transparency mode so it makes two passes over each line instead of just one.

Even when I use Best (Single Pass) or Double Pass Best print quality, text is blurred and colors appear washed out.

Be sure to use PaintJet paper with the printer for the sharpest output. Using plain paper produces fuzzier output which resembles that of a dot matrix printer. Also be sure that you have loaded the paper to that you are printing on the right side. Refer to the instructions on the paper package or the User's Guide for your PaintJet Series printer.

If none of these suggestions solve your print quality problem, refer to the User's Guide for instructions on

- priming
- wiping
- brushing

Out of ink? Here are two indications that a cartridge might be out of ink:

- ink in areas with solid fill streaks or fades out completely.
- frothy, or foam-like, bubbles appear continuously in the window when you repeatedly prime a cartridge.

It is not possible to determine the exact life of a cartridge because the amount of ink used will vary with each page printed. Ink use is highly dependent on the colors chosen and the image density.

Software Applications

Refer to the Read Me file on Disk #1 for more information on software applications.

I'm using Microsoft Word 3.02. When I choose Page Setup or Print from the File menu, I don't see the PaintJet dialogs.

The Read Me file on Disk #1 contains more details on this and other applications.

To access the PaintJet dialogs in Word 3.02, *first* press the Shift key, *then* pull down the File menu and select Page Setup or Print.

Headers and footers are printed over the body of my document.

This sometimes happens in Microsoft Excel and Word 3.02. Try reducing your page length to fit between the header and footer or page number.



A

Appendix A: Color Values

When you create an image in an 8-color application, each color is represented by one of the basic 8 colors that can be printed as 1 dot (pixel). If you import that 8-color image into a document in an application that supports Color or 32-Bit QuickDraw, it will usually still be printed as an 8-color image. *HOWEVER*, if that document has another image on the same page that contains more than 8 colors, the Macintosh uses the color table from the more complex image. This can produce a dramatic hue shift.

The values below are the translated RGB screen values. On the screen, all three values are combined into a single pixel. The Color PrintKit printer resource will blend the colors from the 8-color image to print as close to these screen values as possible.

Original QuickDraw Color	Color QuickDraw or 32-Bit QuickDraw Values		
	Red	Green	Blue
Black	0%	0%	0%
Red	86.5%	3.4%	2.6%
Green	0%	50.0%	6.9%
Blue	0%	0%	82.8%
Cyan	0.9%	66.9%	91.8%
Magenta	94.9%	3.3%	51.9%
Yellow	98.4%	95.1%	2.0%
White	100.0%	100.0%	100.0%

A



B

Appendix B: Additional Fonts

Fonts available for the HP DeskWriter can also be used with your Color PrintKit and PaintJet Series printers. Currently available DeskWriter fonts are listed below.

DeskWriter Font	Corresponds To	Part Number
DeskWriter Font Bundle (includes all fonts below)		22709A
CS Palacio	Palatino	22709B
CS Century Schoolbook	New Century Schoolbook	22709C
CS ITC Bookman	ITC Bookman	22709D
CS ITC Avant Garde	ITC Avant Garde	22709E
CS Triumvirate Narrow	N Helvetica Narrow	22709G
CS ITC Dingbats	ITC Zapf Dingbats	
CS ITC Zapf Chancery	ITC Zapf Chancery	22709G

Important

Be sure to install these fonts into the fonts folder (whether DeskWriter Fonts or HP Fonts) that you already have.

B



C

Appendix C: Using Other Vendor's Fonts

If you plan to install and print screen fonts that were not supplied with your printer, read the following to ensure the highest-quality text output:

For each font size you want to print, you will need to install two sizes of the screen font in your System file—a "1X" font and a "2.5X" font. The 1X font is used for screen display, and the 2.5X font is the font the Macintosh computer sends to the printer for printing.

This is because the PaintJet Series printer's print resolution is 180 dots per inch (dpi), and the Macintosh computer screen resolution is 72 dpi, a 2.5 to 1 ratio. To print fonts at the high resolution, the printer resource "searches" the System file for the 2.5X font. When the printer resource finds it, the resource compresses the 2.5X font down to the 1X font size, without reducing the number of dots. Therefore, the 2.5X font printed at 180 dpi is the same size, but has 2.5 times the density, as the 1X font that displays on the screen at 72 dpi.

For example, if you want to print text in 12 point Chicago (which has no corresponding printer font), the System file on your hard disk needs to contain both 12 point and 30 point Chicago. When the Macintosh computer finds the 30 point font, it will compress and print this, eliminating the jagged edges that appear when Chicago 30 point is not installed.

If a 2.5X font is not available for the font size that you want to print, the Macintosh uses the closest available size. For example, if you select 12-point Chicago, and 24-point Chicago is the closest size to the 30-point, the Macintosh will use that, but optimum sharpness and spacing of the font is lost.

The table below shows the screen font sizes you need to install to print at the highest possible quality.

Remember, you can still print if both sizes aren't installed, but the quality of the output may be inadequate.

To print this size:	Install these two sizes:
10 point	10 and 25 point
12 point	12 and 30 point
14 point	14 and 35 point
18 point	18 and 45 point
24 point	24 and 60 point
30 point	30 and 75 point
36 point	36 and 90 point

Font Sizes You Need to Print Reduced Text

If you print text using Precision Bitmaps or the Reduction setting in the options dialog, the additional font sizes required for high quality output are reduced accordingly. To print at 20% reduction (e.g., using Precision Bitmaps), you need fonts that are twice as large as the screen fonts, or 2X fonts. To print at 50% reduction, you would need 1.25X fonts.

Why? Full-size text requires 2.5X printer fonts. Text printed at 80% of full-size (using Precision Bitmaps or 20% reduction) requires printer fonts that are 80% of the 2.5X fonts, or 2X fonts. Therefore, to print a 10-point font with Precision Bitmaps on, you need the 10-point and a 20-point font in your System file.

If you plan on printing reduced text (e.g., using Precision Bitmaps), install 2X fonts as well as the 1X and 2.5X fonts.

G

Glossary

alert box: A box that appears on the Macintosh screen to give a warning or to report an error message. Its appearance is usually accompanied by a sound warning such as a beep.

Apple Desktop Bus: A low-speed, input-only serial bus with connectors on the back panel of the Macintosh computer to which you can attach the keyboard, mouse and other devices.

Apple menu: The menu farthest to the left in the menu bar, indicated by an Apple symbol, from which you can choose desk accessories and select the new foreground application under MultiFinder.

AppleTalk: The system of network software and hardware built into the Macintosh computer and used in various implementations of Apple communication networks.

application program: A software package that performs a specific task, such as word processing, text formatting, or graphics.

background printing: Printing in the background while the same or another application is running in the foreground.

baud rate: The data transmission rate between a computer and a peripheral. The computer and the peripheral must be configured for the same baud rate for information to transfer correctly.

bitmapped font: Each character that exists in a computer file or in memory as a bitmap, is drawn as a pixel pattern on the graphics screen, and is sent to the printer as graphics data. A bitmapped font's character shape is associated with its size; therefore, to get the best print quality, you must have a version of the font on your disk for each size you want to print. (Scaling may reduce print quality.) The fonts stored in a Macintosh System file are bitmapped fonts. Compare **outline font**, **screen font**, and **printer font**.

buffer: A segment of the computer's or printer's memory where information for input or output is held until it can be processed.

button: A pushbutton-like image in a dialog box where you can click to designate, confirm, or cancel an action.

G

Cancel button: A button that appears in a dialog box. Clicking it cancels the command.

check box: A small box associated with an option in a dialog box. When you click the check box, you may enable or disable that option and possibly affect other related options.

choose: To pick a command by dragging through a menu. You can choose a command after you have selected something for the program to act on; for example, selecting a disk and choosing the Open command from the File menu.

Chooser: A desk accessory that lets you configure your computer system to print on any printer for which there is a **printer resource** in the System folder on the current startup disk. If your Macintosh computer is part of an AppleTalk network system, use the Chooser to connect and disconnect from the network and to choose among devices connected to the network.

click: To position the pointer on an object or icon, then press and quickly release the mouse button.

close: To turn a window or file back into the icon that represents it by choosing the Close command from the File menu or by clicking the close box in the left corner of the window's title bar.

continuous paper: Paper that comes in one continuous sheet, perforated and folded to stack in a Z-pattern. The paper also has vertical strips with sprocket holes that the printer uses to advance the paper. Also called Z-fold paper, fanfold paper, or pin-feed paper.

default: A value or condition that is assumed when the printer is powered on. Also, a preset selection in a dialog box that is automatically used by the computer if you do not make a different selection.

desk accessories: "Mini-applications" that are available from the **Apple menu** regardless of which applications you are using.

desktop: Your working environment – the menu bar and the gray area on the screen. The desktop displays the Trash icon, the icons of any disks in the disk drive(s), and the windows you currently have open.

dialog box: A box containing a message requesting more information from you. The message may be a warning that you are asking the computer to do something that it can't do, or that you are about to destroy some information. In these cases, the message is often accompanied by a beep.

disabled: Describes a menu item or menu that cannot be chosen; the menu item or menu title appears dimmed. A disabled item in a dialog or alert box has no effect when clicked.

double-click: To position the pointer where you want the next action to take place, and then press and release the mouse button twice in quick succession without moving the mouse. Double-clicking is a quick way of performing common tasks such as opening documents.

dpi: Dots per inch. DPI describes the number of ink dots printed within one horizontal inch, also known as the resolution of bitmapped images on the printer. The PaintJet Series printers print images at 180 dpi.

drag: To position the pointer on an icon or object, press and hold the mouse button, move the mouse, and release the mouse button. When you release the mouse button, you either confirm a selection or move an object to a new location.

eject: (1) To remove a disk from a disk drive. (2) To move paper out of the printer.

fanfold paper: See continuous paper.

file: A collection of related information stored on a disk such as document, a folder, a system file, a resource, or an application.

Finder: The application that maintains the Macintosh desktop and starts up other applications at your request. Use the Finder to manage documents and applications, and to get information to and from disks. Compare MultiFinder.

folder: A place to store documents, applications, and other folders on the desktop. Folders allow you to organize information in any way you want.

Font: A complete set of characters in one design and style. In traditional typographical usage, *font* may be restricted to a particular size or may comprise several sizes and styles of the typeface design. Fonts may be bitmapped fonts or outline fonts. See also screen font and printer font.

G

Font/DA Mover: An application that allows you to add or remove fonts and desk accessories from a disk's System file or from a font or desk accessory file.

foreground application: The application whose window is foremost and with which you are currently working. The foreground application has the highest priority for the computer's memory.

handshake: A method of communication between a computer and printer concerning the availability of buffer space (memory) in the printer. A handshake ensures correct and complete data transfer.

icon: A graphic representation of an object, a concept, or a message, usually used to represent disks, applications, folders, documents, and other objects.

landscape: A printing orientation that prints images horizontally (sideways) using the long sides of the paper as the top and bottom.

menu: A list of choices that appears when you point to and press a menu title in the menu bar. Dragging through the menu and releasing the mouse button while a command is highlighted chooses that command.

menu bar: The horizontal strip at the top of the screen that contains menu titles.

modem port: One of two serial communication ports on the back panel of your Macintosh computer to which you can connect your printer. May be marked by a telephone handset icon.

MultiFinder: A multitasking operating system for Macintosh computers that makes it possible to have several applications open at the same time, including background applications that let the computer perform tasks in the background while you work on another in the foreground.

object: Something material that can be perceived by the senses. On the Macintosh desktop, anything displayed that can be selected or manipulated; for example, a character, a title bar, a window, a scroll arrow, etc. Compare icon.

open: To make available. You open files or documents in order to work with them. In the desktop interface, opening an icon causes a window with the contents of that icon to come into view. To open something, choose Open from the File menu, or double-click the icon.

outline font: High-quality scalable fonts. Outline fonts determine character shape such that you only need one font outline for each font family (which saves disk space), and that individual font outline can be scaled from 6 to 250 points without a loss of print quality.

pixel: Short for *picture element*; the smallest dot you can draw on the screen or printer.

pin-feed paper: See **continuous paper**.

point: A unit of measurement for type. One point is 1/72 of an inch. Character height is given in points. For example, 12 point type is 1/6 of an inch high.

portrait: A printing orientation that produces a vertical picture, using the short sides of the paper as the top and bottom of the page.

press: To position the pointer on something and then hold down the mouse button without moving the mouse.

prime: To clear out any air bubbles in the print cartridge that are obstructing ink flow. Refer to your PaintJet Series printer's User's Guide.

print cartridge: The casing that holds the ink used in printing. The PaintJet has two cartridges – one contains black ink and one contains colored ink (cyan, magenta, and yellow). The PaintJet XL has four cartridges – one each containing black, cyan, magenta, and yellow ink.

printer font: A bitmapped screen font in the form of software that is 2.5 times larger than a screen font in the same family. The 2.5X font is the one sent to the printer for printing. This is because the PaintJet Series printer's print resolution is 180 dpi to the Macintosh screen's resolution of 72 dpi, a 2.5 to 1 ratio. To print at the printer's resolution, the resource takes the 2.5X font and compresses it to the 1X font size to obtain the best print quality. See **screen font**. Compare **outline font**.

printer resource: A file in the System folder that provides information the computer needs to communicate with a printer. Also called a driver.

print queue: A collection of spooled documents, awaiting printing, stored on the print server disk and printed in order.

print spooler: A utility that writes a representation of a document's printed image to disk or to memory, schedules it to print in a queue of other jobs, and then prints it.

resolution: A measure of image (display or print) sharpness expressed as number of dots per inch (dpi). The higher the value, the finer the detail of the image.

sans serif: Without serifs; *serifs* are fine strokes that finish off the main strokes of a letter – like the little "feet" on the bottom of the vertical strokes in the letter M. A sans-serif M looks like this: **M**.

screen font: A bitmapped font intended for use on the Macintosh screen. Screen fonts come in specific sizes and appear on the screen at a resolution of 72 dpi. Screen fonts are used by the printer when no corresponding printer font or outline font is available. See **printer font**. Compare **outline font**.

select: To designate where the next action will take place. To select, click an icon or drag across information.

serif font: See **sans serif**.

spool: To send documents to the print server disk to be stored until they are printed.

spooler: See **print spooler**.

startup disk: The disk that contains the System file that the Macintosh computer needs to get started. A startup disk must have at least a Finder and a System file. The HP Color PrintKit software must be installed on a startup disk. Sometimes called a *boot disk*.

System file: A file the Macintosh computer uses to start itself up or to provide system-wide information. Although the System file is represented by an icon just as documents and applications are, it cannot be opened. You can, however, alter its contents. For example, you can use the Font/DA Mover to add or remove screen fonts or desk accessories, changing the contents of the System file.

System folder: A folder on a disk that includes at least the Finder and the System file – two files the computer needs to start itself up. When you first turn on the Macintosh computer, the operating system looks in the disk drives for a disk containing a System folder. The first disk it finds with a System folder becomes the current startup disk.

title bar: The horizontal bar at the top of a window that shows the name of the window's contents. You can move the window by dragging the title bar.

Top of Form: The line on the page where printing can begin; the first line after the top margin.

Trash: An icon on the desktop that you use to discard documents, folders, and applications or to eject disks from the disk drive.

window: A box that displays information on the Macintosh desktop. You can view documents through a window. You can open or close a window move it around on the desktop, and sometimes change its size, edit its contents, and scroll through it.

wiper: The unit on your HP PaintJet Series printer that is used for wiping paper dust and excess ink off the print cartridges.

Z-fold paper: See continuous paper.



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