



## Using Fonts

This chapter contains information on font terminology, and the fonts available with the printer.

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# Font Terminology

This chapter defines the terms used to describe and categorize fonts, and provides information on the availability and use of fonts with this printer.

**Font** is defined as a collection of characters and symbols that are of the same typeface, spacing, size, stroke weight, and style. For example, Courier 10 pitch/12 point is one font, while Courier 20 pitch/12 point is a second font and Courier 10 pitch/12 point italic is a third font.

**Typeface** is defined as a set of characters and symbols that have a unique design. Courier, Helvetica, Dom Casual, and CG Times are typefaces. An example is shown below.

Example

Courier  
Helvetica  
**Dom Casual**  
CG Times

**Serif or Sans Serif Typeface** Serifs are the crosslines or finishing strokes at the top or bottom of a character. CG Times and Courier are serif typefaces. Typefaces without serifs are referred to as sans serif. Helvetica and Letter Gothic are sans serif typefaces. The illustration below shows the difference between a serif and sans serif typeface.



**Spacing** refers to the relative width (spacing) between characters in a font. Font spacing is either fixed-pitch or proportional. All fixed-pitch fonts are given the same horizontal (or width) space. For example, a wide letter such as a "w" and a narrow letter such as an "i" are given the same space. Fixed-pitch fonts are also called monospaced fonts. Fixed pitch fonts are often used for documents in which text must be aligned in columns.

With proportional spacing, characters are given horizontal space based on the needs of each character. Proportionally spaced fonts are easier to read and give a document a professional look. The difference between fixed-pitch spacing and proportional spacing is illustrated below.



**Fixed Pitch**



**Proportional Spacing**

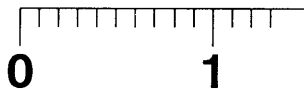
**Pitch** refers to the number of characters printed per horizontal inch. A 10 pitch font will print 10 characters per horizontal inch (cpi). Since spacing varies from character to character with proportionally spaced fonts, pitch applies only to fixed-pitch fonts.

abcdeabcdeab

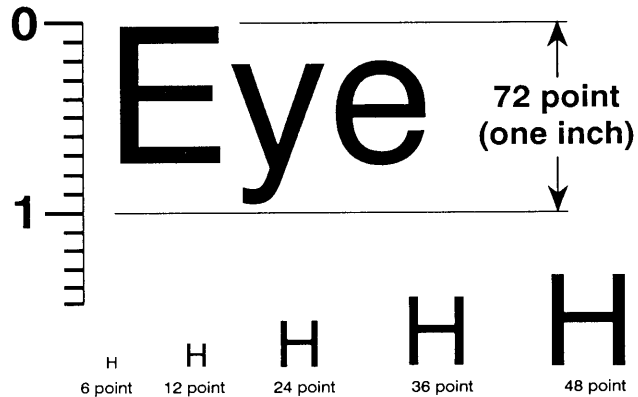
**12 pitch or 12 characters per inch**

abcdeabcde

**10 pitch or 10 characters per inch**



**Point Size (Character Height)** refers to the height of a printed uppercase character. Character height is defined in points. One point is  $\frac{1}{72}$ nd of an inch, so 72 points equals one inch. Both fixed-pitch and proportionally spaced fonts are measured by point size. The illustration below shows how point size is measured.



**Kerning** refers to the adjustment of spacing between proportionally spaced characters to make them visually more even, balanced, and attractive. Fixed-pitch fonts are not kerned.

Example

No Kerning  
Kerning

**Style** refers to the shape of a character such as upright or italic. Italics are used to emphasize text in a document.

Example

You can italicize a *single* word.

**Stroke Weight** refers to the thickness of print, such as bold or normal. Bold is used to emphasize or highlight text in a document.

Example

This is an example of **bold** print.

**Quality** refers to quality of print, such as draft or letter quality. Draft quality prints drafts of a document faster and saves ink. Letter quality is used for documents that require a finished, polished appearance.

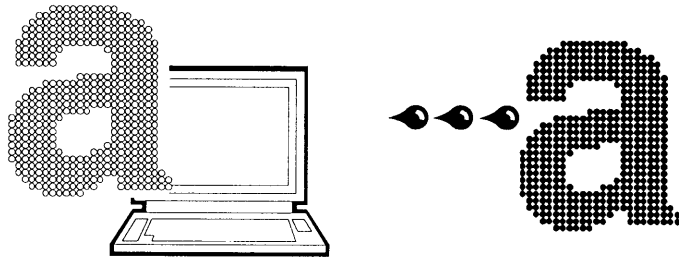
Example

This is Letter Quality.

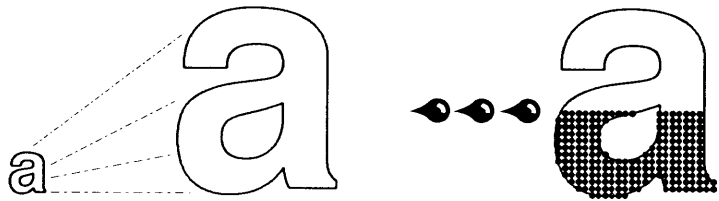


The following are terms that describe font formats.

**Bitmapped Fonts** are a collection of characters and symbols with a unique design and specific size that are stored in the printer, in font cartridges, or on floppy disks as patterns of tiny dots. Bitmapped fonts are rigid and not changeable. The example below illustrates a bitmapped font.



**Scalable Printer Fonts** are the actual outlines of the characters and symbols of a font stored in mathematical form. The character outlines can be scaled (reduced or enlarged) to a wide range of point sizes. Scalable fonts are often referred to as outline fonts. Refer to "HP DeskJet 500C Printer and Fonts" section in this chapter for more information.



**Screen Fonts** are bitmapped images of fonts that match scalable printer fonts. Screen fonts give a close approximation of the printed text on the computer screen.

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# The HP DeskJet 500C Printer and Fonts

The remainder of this chapter concentrates on the HP DeskJet 500C printer and fonts.

## *Types of Fonts*

The DeskJet 500C printer provides access to four types of fonts. Each font type is listed below and described in the following pages.

- **Internal fonts**
- **Cartridge fonts**
- **Soft fonts**
- **Scalable printer fonts**

## *Internal Fonts*

Internal fonts are bitmapped fonts that are in the printer when you receive it. Internal fonts are often referred to as built-in fonts or resident fonts. The table below identifies the internal fonts available through the printer.

**DeskJet 500C Printer Internal (Built-in) Fonts**

<b>Typeface</b>	<b>Orientation</b>	<b>Pitch</b>	<b>Point</b>	<b>Style</b>	<b>Stroke Weight</b>
Courier	portrait	5, 10, 20	6, 12	upright, italic	medium, bold
	portrait	16.67	6, 12	upright	medium
	landscape	10, 16.67, 20	6, 12, 24	upright	medium, bold
CG Times	portrait	PS	6, 12	upright, italic	medium, bold
Letter Gothic	portrait	24	6, 12	upright, italic	medium, bold

The example below shows a few samples of the internal fonts.

Example      *Courier, 12 point, 10 pitch*  
                 *CG Times, 12 point, PS*  
                 *Letter Gothic, 12 point, 12 pitch*

### ***Default Font***

If you do not select a font, the default font will print. The default font is Courier 10 pitch, 12 point, upright, medium-weight. The default character set is PC-8, unless you manually change the character set settings on the mode function switches. Portrait orientation is the printer's default font orientation.

### ***NOTE***

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You can print fixed-pitch fonts in a variety of pitch and point size combinations. The samples below show the internal Courier fonts printed in a combination of pitch and point sizes.

Courier 20 pitch, 6 point	<i>courier</i>
Courier 20 pitch, 12 point	<i>Courier</i>
Courier 16.67 pitch, 6 point	<i>courier</i>
Courier 16.67 pitch, 12 point	<i>Courier</i>
Courier 10 pitch, 6 point	<i>Courier</i>
Courier 10 pitch, 12 point	<i>Courier</i>
Courier 5 pitch, 6 point	<i>Courier</i>
Courier 5 pitch, 12 point	<i>Courier</i>

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## Cartridge Fonts

Cartridge fonts are bitmapped fonts stored in cartridges, which you purchase and install in your printer. Cartridge fonts provide access to additional fonts. You can use DeskJet or DeskJet PLUS, or DeskJet 500 font cartridges with the DeskJet 500C printer. The following is a list of font cartridges available for the DeskJet 500C printer. Refer to appendix D for specific ordering information.

### Recommended Font Cartridges for the DeskJet 500C Printer

Order Number/ Cartridge Name	Typeface/Font	Pitch	Point Size	Style	Character Set Support
<b>22706B</b> <b>Prestige Elite</b>	Prestige Elite	12, 24 16.67, 33.34	10, 7	Upright, Italic Upright	HP ROMAN8, ASCII, ROMAN EXT., HP LEGAL, PC8, ECMA-94 LATIN 1, ISO7. INCLUDES MATH AND PI FONT.
	HP Line Draw	12	12	Upright	
<b>22706C</b> <b>Letter Gothic</b>	Letter Gothic	12, 24, 16.67, 33.34	9.5, 12	Upright, Italic	HP ROMAN8, ASCII, ROMAN EXT., HP LEGAL, PC8, ECMA-94 LATIN 1, ISO7.
	HP Line Draw	12	12	Upright	
<b>22706L</b> <b>Landscape Fonts Cartridge</b>	Letter Gothic	12, 24, 16.67	12, 9.5	Upright, Italic Upright	HP ROMAN8, ASCII, ROMAN EXT., HP LEGAL, PC8, ECMA-94 LATIN 1, ISO7.
	Courier	10, 20	12	Upright	
<b>22706M</b> <b>Presentations</b>	Presentations	6.5, 13, 8.1, 16.2, 10, 20	14, 16, 18	Upright	ASCII
	Letter Gothic	10, 20	14	Upright	
	HP Line Draw	10	12	Upright	
<b>22706R</b> <b>Times Roman Collection</b>	Times Roman	Proportional	5, 6, 10, 12 4, 7, 8, 14	Upright, Italic Upright	HP ROMAN8, ASCII, HP LEGAL, PC-8, PC-8 D/N, PC-850, ISO7, ECMA-94 LATIN 1.
<b>22706T</b> <b>Helvetica Collection</b>	Helvetica	Proportional	5, 6, 10, 12 4, 7, 8, 14	Upright, Italic Upright	HP ROMAN8, ASCII, HP LEGAL, PC-8, PC-8 D/N, PC-850, ISO7, ECMA-94 LATIN 1.

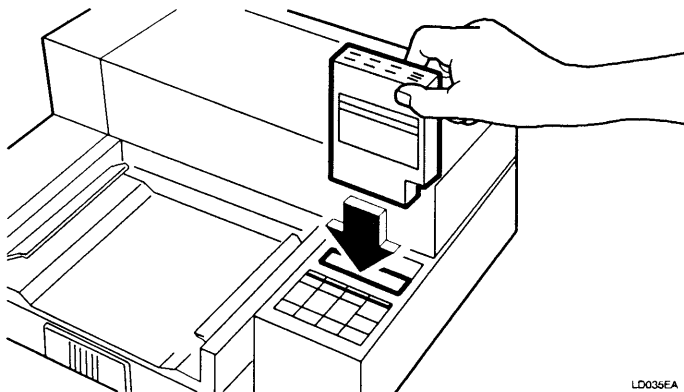
<b>Order Number/ Cartridge Name</b>	<b>Typeface/Font</b>	<b>Pitch</b>	<b>Point Size</b>	<b>Style</b>	<b>Character Set Support</b>
<b>22706U Times Roman Headlines</b>	Times Roman	Proportional	15, 30	Upright	HP ROMAN8, ASCII, HP LEGAL, PC-8, PC-8 D/N, PC-850, ISO7, ECMA-94 LATIN 1.
<b>22706V Helvetica Headlines</b>	Helvetica	Proportional	15, 30	Upright	HP ROMAN8, ASCII, HP LEGAL, PC-8, PC-8 D/N, PC-850, ISO7, ECMA-94 LATIN 1.
<b>22706W WordPerfect Font Cartridge</b>	CG Times	Proportional	6, 24 8, 10, 12, 14	Upright Upright, Italic	DeskTop Symbols
	CG Times Bold	Proportional	18	Upright	
	Univers	Proportional	14, 18, 24	Upright	
<b>C2109B Global Text (kerned)</b>	CG Century Schoolbook	Proportional	8, 10	Upright Upright, Italic	PC-8, PC-8 D/N, PC-850, HP ROMAN-8, US-ASCII, ECMA-94 LATIN 1.
	CG Triumvirate	Proportional	10, 14	Upright	
<b>C2109C Garamond Collection (kerned)</b>	Garamond Antiqua	Proportional	8	Upright	PC-8, PC-8 D/N, PC-850, HP ROMAN-8, US-ASCII, ECMA-94 LATIN 1.
	Garamond Antiqua / <i>Kursiv</i> (italic)	Proportional	10, 12	Upright, Italic	
	Garamond Halbfett (bold)	Proportional	14	Upright	
<b>C2109D Dom Casual (kerned)</b>	Dom Casual	Proportional	12, 14, 18, 24	Upright	ECMA-94 LATIN 1.
<b>C2109E Brush (kerned)</b>	Brush	Proportional	12, 18, 24	Upright	ECMA-94 LATIN 1.

Bold can be accessed for most fonts except Dom Casual and Brush.

See appendix A for a listing of all character sets.



4. Hold the font cartridge with the label facing you and the connectors facing down, and insert the cartridge into the cartridge slot. See below.



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**CAUTION**

Do not touch the connector on the bottom of the cartridge or the connector in the printer. Doing so may damage both units.

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5. Push down firmly on the top of the font cartridge until it snaps into place.
6. Turn on the printer. All of the font cartridge lights will flash on briefly, then the Portrait light on the printer control panel will remain on.
7. Replace the tray cover.

The font cartridge is ready for use. Select fonts from the cartridge with the same steps you would use to select internal fonts. To ensure that fonts from the cartridge will print, make sure the printer driver for the specific font cartridge or font is selected. Refer to your software manual for additional information.

## ***Soft Fonts***

Soft fonts are bitmapped fonts that your computer can transfer (download) from a disk file to the printer. The DeskJet 500C printer requires a 256K RAM cartridge to use soft fonts. A maximum of two 256K RAM cartridges can be installed in the printer. RAM cartridges cannot be used to increase the printer's input buffer. A downloading utility and documentation on using soft fonts is provided with each soft font product.

Once the fonts are downloaded to the printer and an appropriate printer driver is selected, you can select a soft font in your software package with the same steps you would use to select an internal or cartridge font. Soft fonts do not reside permanently in the printer; they are eliminated each time the printer is turned off. Soft fonts require more steps and take a bit more time to use, but they allow you to custom mix and match fonts to your needs. If you will be using many different fonts frequently, soft fonts are the most cost effective to use. Appendix D offers ordering information.

## ***Scalable Printer Fonts***

Scalable fonts are the outlines of the characters and symbols of a font stored in mathematical form. The typefaces can be scaled from 4 to 127 point.

Scalable fonts for the HP DeskJet 500C Printer are accessible through the HP DeskJet Series Printer Driver for Microsoft Windows. You must use Microsoft Windows version 3.0 to use scalable fonts. The printer driver with three scalable typefaces (Courier, Univers, and CG Times) was included in the box with your printer.

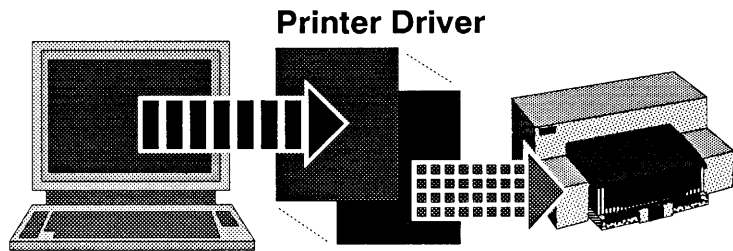
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## Methods for Accessing Fonts

Fonts can be accessed through your software, the printer control panel, or by sending printer commands. The method you use to select fonts depends on the software you use.

### *Using Software*

Software plays a major role in your ability to access fonts. To select and print fonts in a document, you will need to install a specific printer driver for the HP DeskJet 500C printer or HP DeskJet Family printers.



Printer drivers are discussed in chapter 2, "Using Your Printer" and in the *HP DeskJet 500C Printer Software Information Guide*. You should also refer to your software manual for additional information. The printer driver that you install in your software determines the type of access you have to available fonts, and the steps you would use to select a font.

To use scalable fonts with the DeskJet 500C printer and Microsoft Windows 3.0, you must install the HP DeskJet Series Printer Driver that came with your printer.

## *Using the Printer Control Panel*

If your software allows you to use the printer control panel to select fonts, press the Font button to select between the Courier 10 and 16.67 pitch fonts in portrait orientation. Letter Gothic, CG Times and some Courier fonts (5 and 20 pitch) cannot be accessed through the printer control panel. The landscape Courier 10 pitch font can be selected by pressing the Font button until the Landscape light turns on. To select additional internal fonts, you must use your software package or printer commands. Fonts from installed font cartridges can be selected by pressing the Font button until the light below your font selection on the cartridge turns on. *Some software packages will override font selections made through the printer control panel.*

## *Using Printer Commands*

Most software packages allow you to select fonts without using printer commands. However, if you need to use printer commands to select fonts, use the following information. The HP DeskJet 500C printer follows a decision-making process to sort through various font characteristics. Each characteristic has a specific printer command and priority in the printer's font selection hierarchy (see below).

### **Prioritized Font Characteristics**

<b>Priority</b>	<b>Characteristic</b>	<b>Printer Command</b>	<b># = numeric value field</b>
1	Orientation	$E_c \&/\# 0$	0 = portrait, 1 = landscape
2	Character Set	$E_c (\# U)$	see appendix B for values
3	Spacing	$E_c (s \# P)$	0 = fixed, 1 = proportional
4	Pitch	$E_c (s \# H)$	depends on pitches available
5	Point Size	$E_c (s \# V)$	depends on point sizes available
6	Style	$E_c (s \# S)$	0 = upright, 1 = italic
7	Stroke Weight	$E_c (s \# B)$	0 = normal, 3 = bold
8	Typeface	$E_c (s \# T)$	see appendix B for values

When you send a printer command to select a font, you should send the appropriate command for each characteristic in the order identified on the previous page. The example below shows how you can combine printer commands to send for two different fonts. Refer to appendix B for information on combining printer commands and for numeric value fields.

## To Select:

Courier, Italic  
(10 pitch, 12 point)

Send: E\_c&/00 E\_c( 10U E\_c(s Op 10h 12v 1s 0b 3t 2Q

CG Times  
(PS, 12 point)

Send: E\_c&/00 E\_c( 10U E\_c(s 1p 12v 0s 0b 410lt 2Q

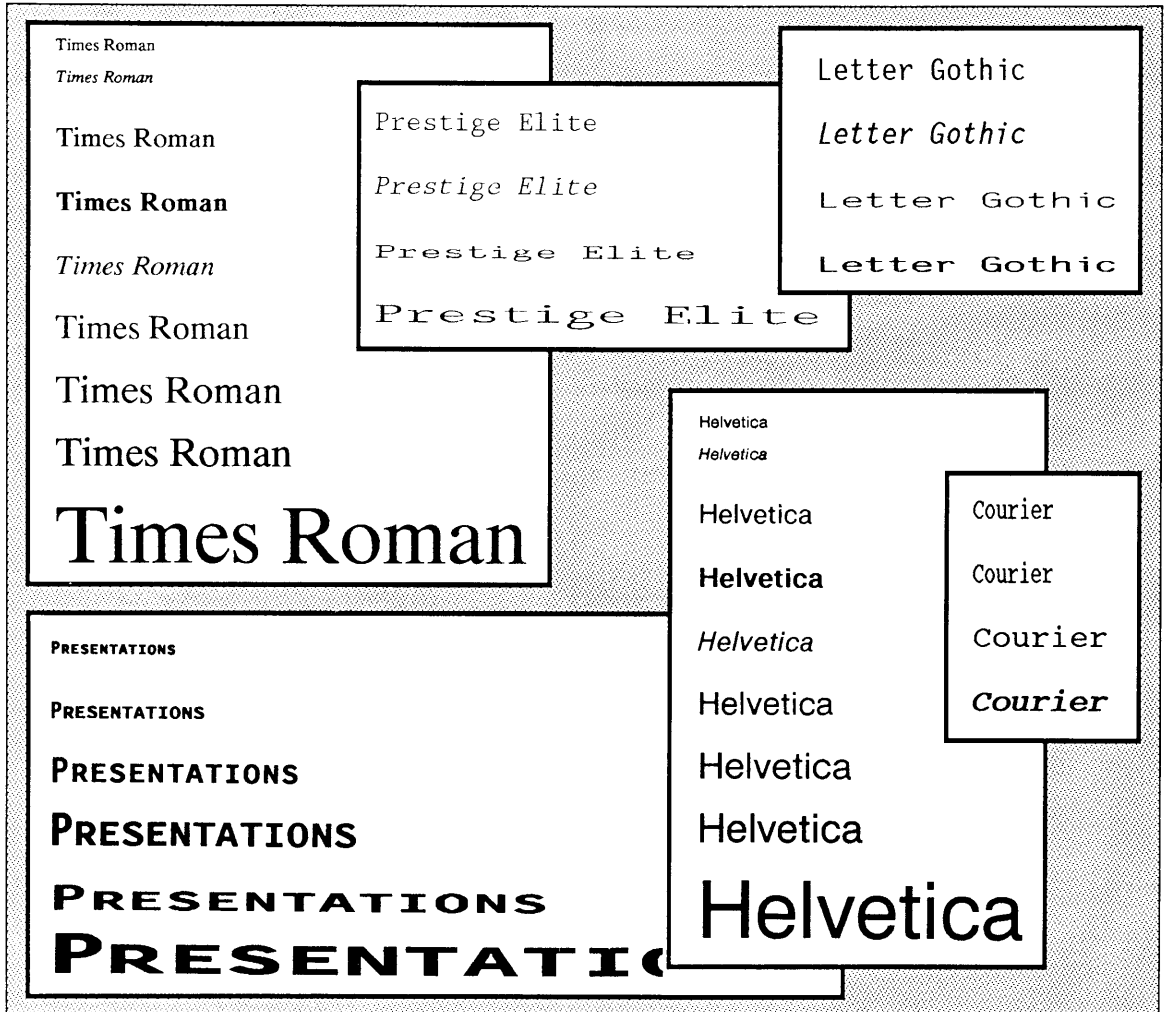
ORIENTATION
PRI/SEC CHARACTER SET (=Pri.)=Sec
CHARACTER SET
PRI/SEC FONT ATTRIBUTES (=Pri.)=Sec
SPACING 0=Normal, 1=Proportional
PITCH (Characters per inch)
POINT SIZE (Char Ht in 72nds of an Inch)
STYLE 0=Upright, 1=Italic
STROKE WEIGHT 0=Normal, 3=Bold
TYPEFACE
QUALITY 1=Draft, 2=Letter

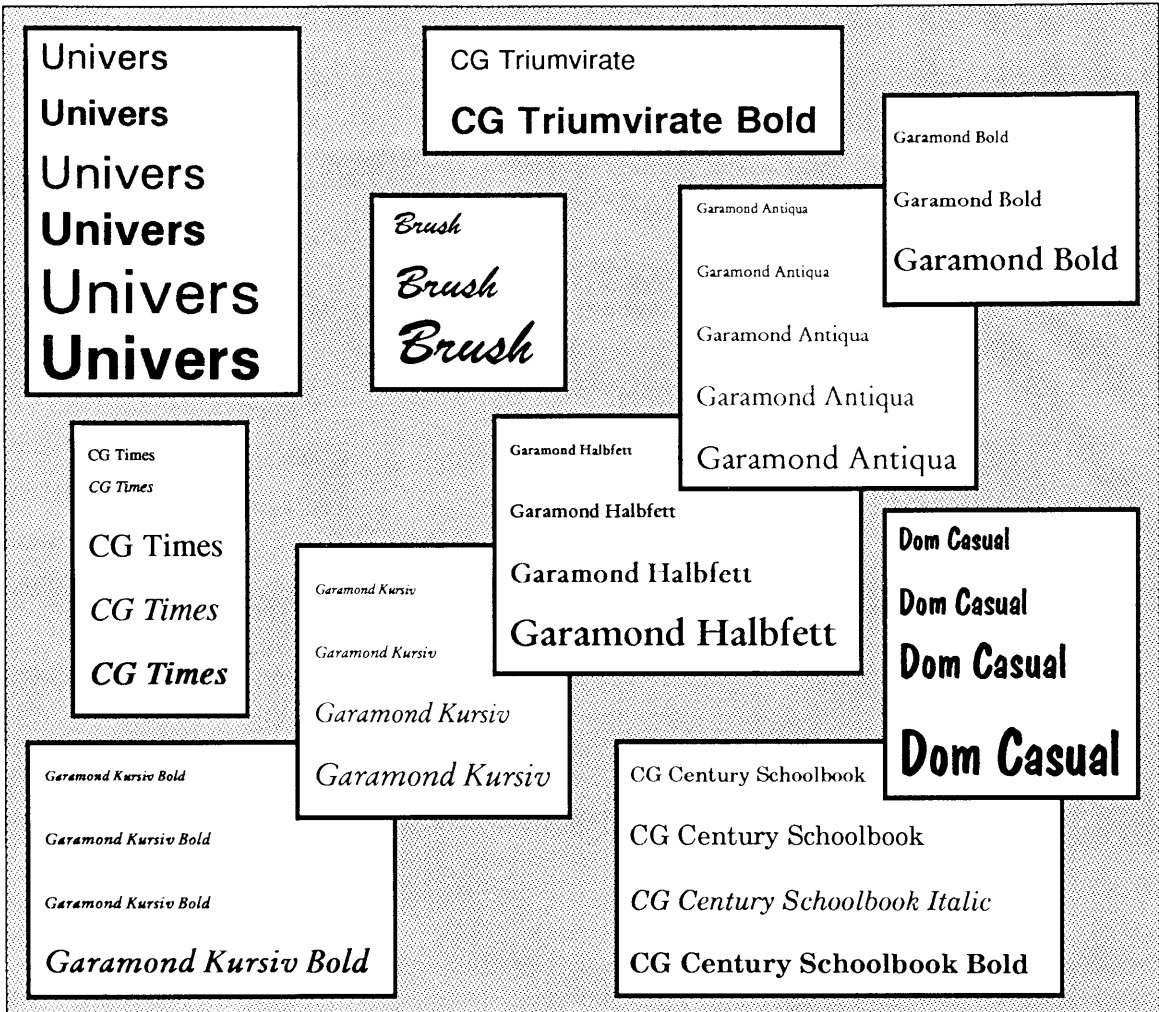
Using the printer's priority list ensures that the appropriate printer commands are sent for the selected font. For example, if you send printer commands to select the Letter Gothic 12 pitch, 12 point font you must send the pitch command to print this font. The default value for the pitch characteristic is 10. If you do not send the command to change pitch to 12, the default Courier 10 pitch font will print. The Courier typeface will print because the pitch characteristic is higher in priority than typeface.

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## Expanding Your Font Selection

You can expand your font options by purchasing font cartridges or soft fonts. Samples of some of the fonts available for the HP DeskJet 500C printer are shown below and on the following page. Ordering information is available in appendix D.





If you use the HP DeskJet Series Printer Driver for Microsoft Windows that came with your printer, you can expand your font selection by purchasing scalable typefaces from the HP MasterType Library. Samples of the typefaces that you can order are shown below.

Antique Olive	ITC Avant Garde Gothic®		
<b>Antique Olive Compact</b>	<i>Brush</i>		
CG Bodini	ITC Benguiat®	<b>ITC Bookman®</b>	
CG Triumvirate Condensed	Garamond Antiqua		
◆ ➤ ⊙ ➤ ➤ ➤ ➤ ☆ ⊗	Dom Casual	Revue Light	
CG Century Schoolbook	University Roman		
CG Triumvirate	Univers Condensed	Revue Shadow	
<i>Park Avenue</i>	Stymie	<b>Cooper Black</b>	
Shannon	<b>ITC Souvenir®</b>	ITC Lubalin Graph®	
CG Palacio	Futura® II	Unicial	
Microstyle	CG Omega	CG Times	Univers®

**NOTE**

The HP DeskJet 500C printer allows access to MasterType Library scalable fonts only with the HP DeskJet Series Printer Driver for Microsoft Windows.

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# Using Fonts in Your Documents

Fonts can set the mood and tone of a document. Here are a few principles for designing documents with fonts.

- Select fonts that are appropriate for the message you want to communicate. Serif typefaces (CG Times, Courier) are typically used for formal letters and sans serif typefaces (Letter Gothic) are used for informal memos or spreadsheets. Sans serif typefaces can also be used for titles and headings.
- Use fonts wisely. Using too many fonts in a document causes confusion for your reader.
- Use bold or italic fonts to emphasize or visually cue the reader to important information.

## *Choosing Fonts*

Use the following tips for choosing internal fonts.

### **NOTE**

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CG Times, Letter Gothic, and some Courier fonts (5 and 20 pitch) cannot be selected from the printer control panel. These fonts are selected through software or printer commands.

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**Courier** is a fixed-pitch serif typeface frequently used for correspondence and professional documents. The Courier 10 pitch font, often called a typewriter-style typeface lends a cordial feel to a document. Use the Courier 16.67 pitch font to efficiently present text in a limited amount of space.

**Letter Gothic** is a fixed-pitch sans serif typeface used for a variety of applications. This typeface has a clean, modern look and works well for text in columns, tables, and lists. The Letter Gothic bold font can be used as a subheading.

**CG Times** is a kerned proportionally spaced serif typeface with a traditional look. This typeface provides an authoritative tone and is very easy to read. The CG Times 12 point font works especially well as body text in long documents and for correspondence.





## Troubleshooting

This chapter contains helpful troubleshooting tips and solutions for problems your printer may have that do not require the help of trained service personnel.

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## Telephone Support

The information contained in this section covers common problems and suggests solutions. If your printer is not operating properly, follow the suggestions in this section. If your printer's problem is not covered here, or you still need help, contact your nearest HP Sales and Support Office.

# No Response from the Printer

Symptom	Cause	Solution
<p><i>Printer is on, nothing prints.</i></p>	<p>The printer is not ready for printing.</p>	<p>Make sure the Ready light on the printer control panel is on. If the Ready light is off, press the Status button on the printer control panel and the Ready light will turn on.</p>
	<p>The printer or computer is not connected properly to the interface cable.</p>	<p>Make sure the correct interface cable was connected to the correct interface port (serial or parallel) on your printer, and the other end of the cable was connected to the correct interface port on your computer.</p> <p>Make sure the interface cable is connected securely to the printer and to the computer. Printing will not occur if the connection is loose to either port.</p>
	<p>Communication was not established between the computer and printer.</p>	<p>Use the steps in "Establishing Communication" of appendix C in this user's guide.</p>
	<p>Your software was not setup to print to your printer.</p>	<p>Refer to the <i>HP DeskJet 500C Printer Software Information Guide</i> for software setup steps.</p>
	<p>The tape on the ink nozzles of the print cartridge was not removed.</p>	<p>Remove the print cartridge, and remove the transparent tape covering the ink nozzles (bottom of print cartridge).</p>
	<p>The print cartridge is not installed properly.</p>	<p>Remove the print cartridge, and re-install it. Make sure the green arrow on the cartridge top points to the green dot on the top of the cradle, and that the print cartridge "snaps" into place.</p>
	<p>The print cartridge may be out of ink.</p>	<p>Press the Clean button, and try printing. If nothing happens, replace the print cartridge with a new one.</p>

<b>Symptom</b>	<b>Cause</b>	<b>Solution</b>
<p><i>The printer is on and nothing happens</i></p>	<p>The printer is not properly connected to an electrical power source.</p>	<p>Turn off the printer and make sure the power module plug is connected firmly to the printer's power socket, and the other end of the power module cord is connected to a grounded wall outlet.</p> <p>If you use a power strip, make sure the power strip is plugged into a grounded wall outlet, and the power strip is on.</p> <p>It is also possible that the protection circuitry in the power module was activated by a power surge. Turn the printer off and on to clear this error.</p>

# Control Panel Error Light Indications

This section identifies printer control panel error light indications and provides solutions to each error indication.

<b>Reset</b>	<b>Envelope</b>	<b>Clean</b>	<b>Print Cartridge</b>
	<input type="checkbox"/> Portrait <input type="checkbox"/> Landscape <input type="checkbox"/> Compress	<input type="checkbox"/> Busy <input type="checkbox"/> Ready	<input type="checkbox"/> Change Cartridge <input type="checkbox"/> Draft
<b>Load/Eject</b>	<b>Font</b>	<b>Status</b>	<b>Quality</b>

LD038EA

Symptom	Cause	Solution
<i>Ready Light is blinking.</i>	The printer is out of media.	<p>Load paper or media in the printer's IN tray and press the Status button on the printer control panel.</p> <p>If media is already loaded, make sure the paper tray extender is pushed in toward the printer and media is flush against the right side of the printer's IN tray.</p>
<i>Busy and Ready lights are blinking.</i>	A paper jam occurred.	Use the steps in "Clearing Paper Jams" in this chapter.
<i>Busy light blinking, printer won't print in landscape orientation.</i>	The printer is waiting to print.	Press the Load/Eject button.

<b>Symptom</b>	<b>Cause</b>	<b>Solution</b>
<i>All printer control panel lights are blinking alternately.</i>	The print carriage is unable to move.	<p>Make sure all packing tape was removed from the print cartridge cradle.</p> <p>Turn off the printer, open the printer's top cover, and remove anything blocking the movement of the print carriage. Gently move the print carriage to the left and back again with your hand. Then, turn on the printer.</p> <p>If the lights continue to blink and you have font cartridges installed, make sure the problem wasn't caused by a font cartridge failure. Remove any installed font cartridges and turn the printer off and on. If the lights continue to blink, contact your nearest HP Sales and Support Office.</p>
<i>Change Cartridge and Busy lights are blinking.</i>	The print cartridge contacts and print cartridge cradle contacts need to be brushed.	<p>Brush the contacts as described in "Brushing the Print Cartridge Contacts" section of this chapter.</p> <p>If the lights continue to blink after brushing, replace the print cartridge with a new one.</p>
<i>Draft and Change Cartridge lights are blinking alternately with Portrait, Landscape, Compress, Busy and Ready lights.</i>	A problem with an installed font cartridge occurred.	Remove any font cartridges installed in the printer and turn the printer off and on. If the lights continue to blink without font cartridges installed, contact your nearest HP Sales and Support Office.
<i>All control panel lights are on.</i>	The printer was hung up.	Turn off the printer and computer. If the computer and printer are connected to a power strip, turn off the power strip. Turn on the printer, wait 30 seconds and turn on the computer. If nothing happens, contact your nearest HP Sales and Support Office.
<i>All printer control panel lights blink simultaneously.</i>	The printer failed an internal test.	<p>Turn the printer off and on.</p> <p>If the lights continue to blink, contact your nearest HP Sales and Support Office.</p>

<b>Symptom</b>	<b>Cause</b>	<b>Solution</b>
<i>Change Cartridge light is blinking, print carriage has moved to the center of the printer.</i>	The printer is waiting for you to change the print cartridge.	Change the print cartridge and press the Print Cartridge button.
<i>Change Cartridge light is blinking, print carriage is in "home" position.</i>	The printer is waiting for you to change the print cartridge.	<p>The print carriage moves to the center when you press the Print Cartridge button on the printer control panel. If the print cartridge is not changed within 5 minutes, the print carriage returns to the "home" position and the Change Cartridge light blinks.</p> <p>Press the Print Cartridge button, change the print cartridge, and press the Print Cartridge button again to return the print carriage to the "home" position.</p>
<i>Portrait and Landscape, lights are blinking alternately with Compress, Ready, Busy, Change Cartridge, and Draft lights.</i>	The printer has detected a problem with an installed RAM cartridge.	Remove any installed RAM cartridges and turn the printer off and on. If the lights continue to blink, contact your nearest HP Sales and Support Office.
<i>Portrait, Landscape, Busy, and Change Cartridge lights are blinking alternately with Compress, Ready, and Draft lights.</i>	An emulation cartridge is installed in the printer. The DeskJet 500C printer does not support the use of emulation cartridges.	Remove the emulation cartridge and turn the printer off and on. If the lights continue to blink, contact your nearest HP Sales and Support Office.

# Print Quality Problems

This section identifies some of the causes for print quality problems. An example of one of the problems is shown below. Refer to the following table for a solution.

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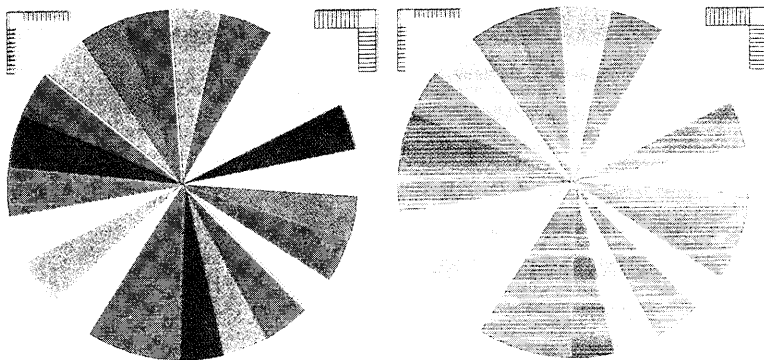
Symptom	Cause	Solution
<i>incomplete characters, dots or lines missing from printouts</i>  See example above.	Print Cartridge needs to be re-installed.	Remove the print cartridge and re-install it.  If print quality does not improve, brush the contacts on the print cartridge and the print cartridge cradle as described in "Brushing the Print Cartridge Contacts" in this chapter.  If print quality does not improve, clean the print cartridge by pressing the Clean button on the printer control panel. See "Print Cartridge Problems" in this chapter.
<i>inconsistent print density</i>	The print cartridge needs to be "cleaned".  Paper does not meet recommendations.	Press the Clean button on the printer control panel.  Try printing on a different paper type.

<b>Symptom</b>	<b>Cause</b>	<b>Solution</b>
<i>Fading characters, black print cartridge is installed.</i>	Black print cartridge is running out of ink.	Press the Clean button on the printer control panel. If print quality does not improve, replace the print cartridge with a new one.
<i>Printing is Fuzzy.</i>	The wrong print quality mode was selected.  Media quality does not meet recommendations.  The "print" side was not used for printing.	Make sure letter quality mode is selected.  Refer to "Using Media in Your Printer" in chapter 1 of this user's guide for recommendations. Use HP CX JetSeries CutSheet special paper for best results printing color. Use HP LX JetSeries Transparency film for transparency printing.  Make sure you are using the "print" side of the media. The "print" side is indicated on special paper and transparencies. If you use plain paper, turn the paper over and try the other side.
<i>Faint print, black print cartridge is installed.</i>	Media quality does not meet recommendations.	Refer to "Using Media in Your Printer" in chapter 1 of this user's guide for recommendations.  If you use plain paper, try using a different paper type.
<i>Faint print, color print cartridge is installed.</i>	Media quality does not meet recommendations.	Refer to "Using Media in Your Printer" in chapter 1 of this user's guide for recommendations.  If colors or hues are missing in your printout, see "Color Printing Problems" in this chapter.

# Color Printing Problems

Symptom	Cause	Solution
<i>Missing colors or hues See example below</i>	The print cartridge is running out of color ink.	Replace the print cartridge with a new one.
<i>Printed colors don't match screen colors.</i>	Color settings in your software may need adjustment.	Refer to the <i>HP DeskJet 500C Printer Software Information Guide</i> for information.
<i>Colors appear washed out.</i>	Media quality does not meet recommendations.	Refer to "Using Media in Your Printer" in chapter 1 of this user's guide for recommendations.
<i>Black and white output instead of color</i>	The black print cartridge was installed.  Color printing was not selected in your software package, or the appropriate printer driver was not used.	Remove the black print cartridge and install the color print cartridge.  Refer to your software manual, or to the <i>HP DeskJet 500C Printer Software Information Guide</i> for information on color printing.

The print sample on the right was printed with a print cartridge that is running out of color ink.



# Printing Problems

Symptom	Cause	Solution
<i>Printing is skewed or slanted.</i>	Media loading problems.	Refer to the "Media Handling Problems " section in this chapter for solutions to this problem.
<i>Printer seems to be printing, but nothing is printed.</i>	Tape over the ink nozzles (bottom of print cartridge) was not removed.	Remove the print cartridge and remove transparent tape covering the ink nozzles.
	The print cartridge wasn't "snapped" into place.	Re-install the print cartridge and make sure to push the green arrow toward the green dot until the print cartridge "snaps" into place.
<i>Incorrect printout.</i>	The appropriate printer driver was not selected in your software package.	Check the printer driver selected in your software. Printing problems occur when the wrong printer driver is selected.
<i>Internal fonts selected are not printing.</i>	The font was not selected correctly in your software.	Check your software manual for information on how to select fonts. If you used the printer control panel, some software packages override control panel font selections.
<i>Optional fonts selected are not printing.</i>	The font was not installed.	If you use font cartridges, make sure the font cartridge is pushed down into the font cartridge slot. If you use soft fonts, make sure the font was downloaded correctly. If you use scalable fonts, make sure the fonts were installed correctly.
	The font was not selected correctly in your software.	Check your software manual for information on how to select fonts. If you used the printer control panel, some software packages override control panel font selections.

# Media Handling Problems

Symptom	Cause	Solution
<i>Printer loads multiple sheets of media .</i>	Paper is stuck together.	Remove paper and reload it.
	Different paper types and weights are loaded.	Remove paper and try using one paper type. Also, refer to "Using Media in Your Printer" to ensure paper meets recommendations.
	More than a 1/2 inch (1cm) stack of media is loaded.	Take out a few sheets of media.
<i>Media will not eject from the printer.</i>	Media needs to be manually ejected.	Press the Load/Eject button on the printer control panel.
	The computer was turned off during printing.	Turn the printer off and on to reset the printer. Information waiting to print is lost when the printer is turned off.
<i>Paper won't load into the printer.</i>	Paper is not loaded properly into the IN tray.	Make sure the paper tray extender is pushed in toward the printer and that the paper is flush against the right side of the printer's IN tray.
	Accumulated paper dust on the paper feed rollers is preventing loading.	Open the printer's top cover, and remove the OUT tray cover and OUT tray. Wipe the paper feed rollers with a soft lint free cloth. Do not use cleaning fluids.
<i>Transparencies won't load into the printer.</i>	More than one media type is loaded.	Remove all other media and load only transparencies.
	The IN tray is loaded with only one transparency.	Load at least 10 transparencies, even if you plan to print one transparency to ensure proper loading. If you have less than 10 transparencies, try loading the transparencies on top of a stack of paper. Printing may be slightly skewed if transparencies aren't loaded squarely.

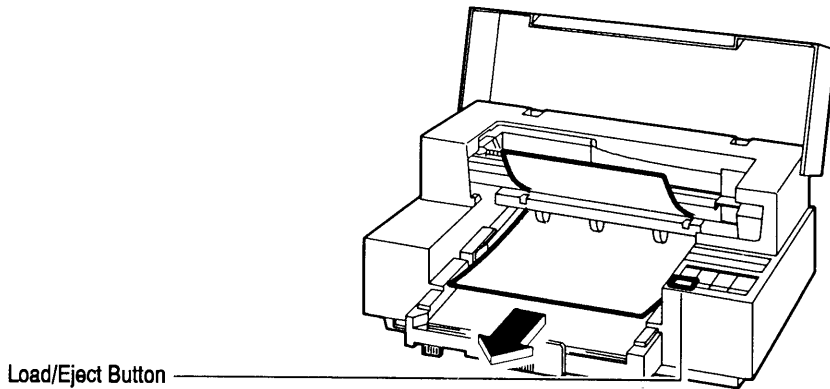
<b>Symptom</b>	<b>Cause</b>	<b>Solution</b>
<i>The envelope won't load into the printer</i>	<p>The envelope was not loaded under the paper feed rollers.</p> <p>The Envelope button was not pressed.</p> <p>Settings for envelope printing were not selected in your software.</p>	<p>Slide the envelope under the paper feed rollers with the right side of the envelope flush against the right side of the printer's IN tray.</p> <p>Press the Envelope button.</p> <p>Change your software settings for printing envelopes. Refer to your software manual for more information.</p>
<i>Media loading is skewed or slanted</i>	<p>More than one media type is loaded.</p> <p>Media is not loaded squarely in the printer.</p> <p>More than a 1/2 inch (1 cm) stack of media is loaded.</p> <p>Accumulated dust on the printer's paper feed rollers is preventing proper loading.</p>	<p>Remove other media types.</p> <p>Reload media and make sure the right side of the paper is flush against the right side of the IN tray.</p> <p>Take out some of the media loaded in the IN tray. If you use transparencies, make sure that at least 10 transparencies are loaded. If you have less than 10 transparencies, try loading it squarely on top of a stack of paper. Printing may be slightly skewed if transparencies aren't loaded squarely.</p> <p>Open the printer's top cover, and remove the OUT tray cover and OUT tray. Wipe the paper feed rollers with a soft lint free cloth. Do not use cleaning fluids.</p> <p>If you use preprinted forms, make sure the forms were printed squarely on the paper.</p> <p>Contact your nearest HP Sales and Support Office if the problem persists.</p>

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## Clearing Paper Jams

Paper jams are indicated by blinking Ready and Busy lights. Use the steps below to clear a paper jam.

1. Open the printer's top cover.
2. Remove the OUT tray cover and the OUT tray.
3. Pull the lower portion of the paper toward you while pressing the Load/Eject button.
4. Turn off the printer.



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5. Turn on the printer. If the Ready and Busy lights blink, make sure all paper was removed from the printer's paper path.
6. Replace the OUT tray and OUT tray cover.

To prevent paper jams, use the following tips:

- Make sure nothing blocks the printer's paper path.
- Make sure the IN tray contains no more than a  $\frac{1}{2}$  inch (1 cm) stack of media.
- Load paper properly.

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# Printer Self Test Problems

If a printer self test pattern does not print when you try to initiate one, try the following:

- Make sure that paper is loaded in the printer's IN tray.
- Check for a paper jam in the printer. Refer to "Clearing Paper Jams" on the previous page of this user's guide for more information.
- Disconnect the printer from your computer and try the printer self test again. Use the steps below to print a printer self test.

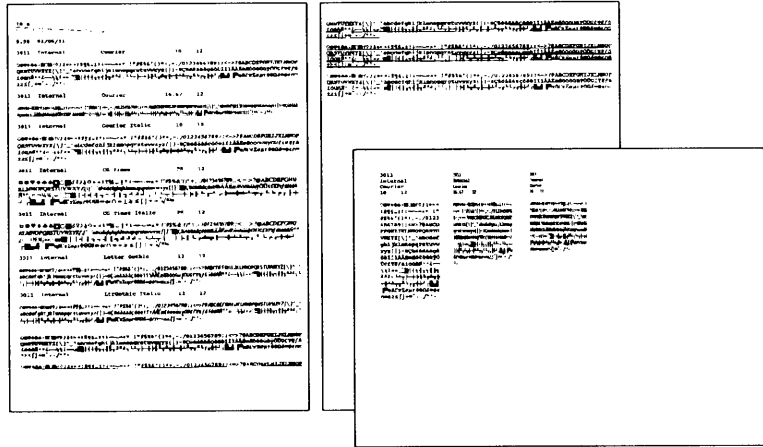
## *Printing a Printer Self Test*

1. Turn off the printer
2. Press and hold the Font button on the printer control panel while turning on the printer. Release the Font button after paper begins to load.

A printer self test pattern will print. If you have a color print cartridge installed the printer self test pattern will resemble the one shown below.

1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50

An example of a three page self test pattern printed with the black print cartridge installed is shown below.



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If lights on the printer control panel blink alternately, refer to the "Control Panel Error Indications" section in this chapter.

If you are unable to determine the reason your printer will not print the printer self test, contact HP Personal Peripherals Assist at the number given in the beginning of this chapter. For more information, refer to "The Printer Self Test" in chapter 2 of this user's guide.

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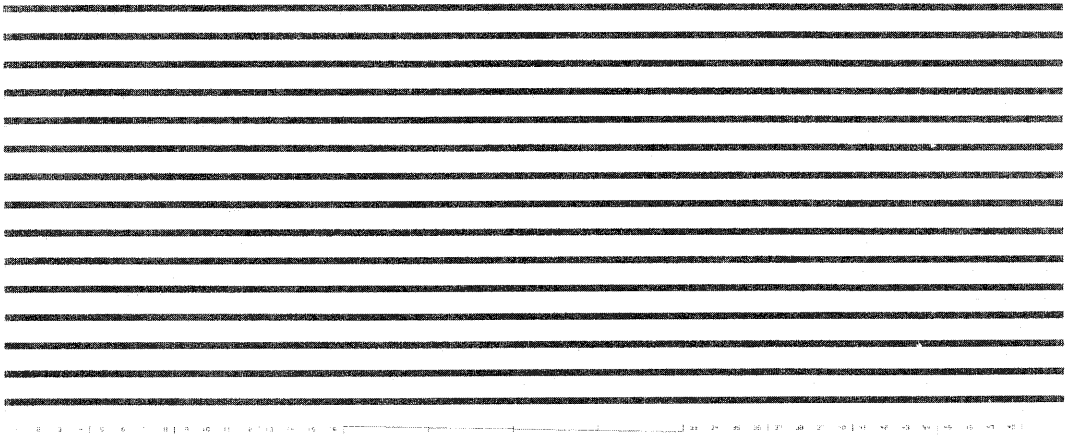
## Print Cartridge Problems

If the print cartridge does not return to the "home" position when you press the Print Cartridge button, the print cartridge may need to be cleaned using the brush provided with the print cartridge storage container. See the "Brushing the Print Cartridge Contacts" later in this chapter.

### *"Cleaning" the Print Cartridge*

To restore print quality when dots or lines are missing from your printout, press the Clean button on the printer control panel. If you clean the color print cartridge, a pattern will print after the cleaning process is completed. A color clean pattern is shown below.

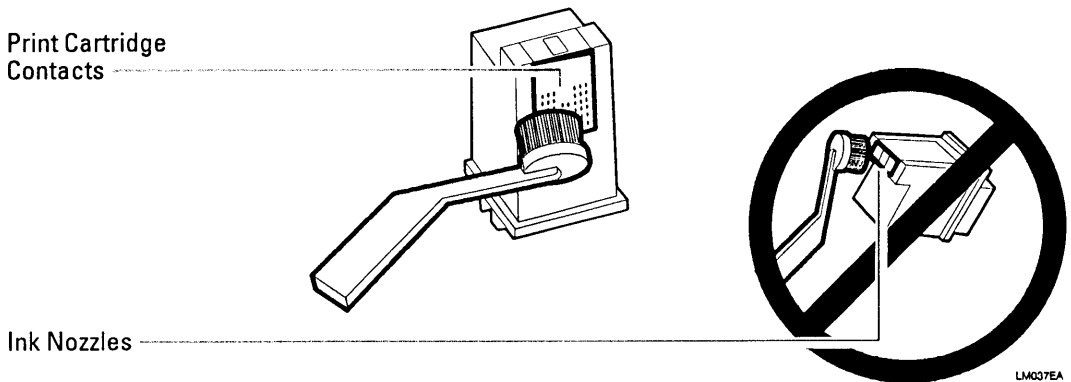
Do not clean the print cartridge unnecessarily, as this will shorten the print cartridge life.



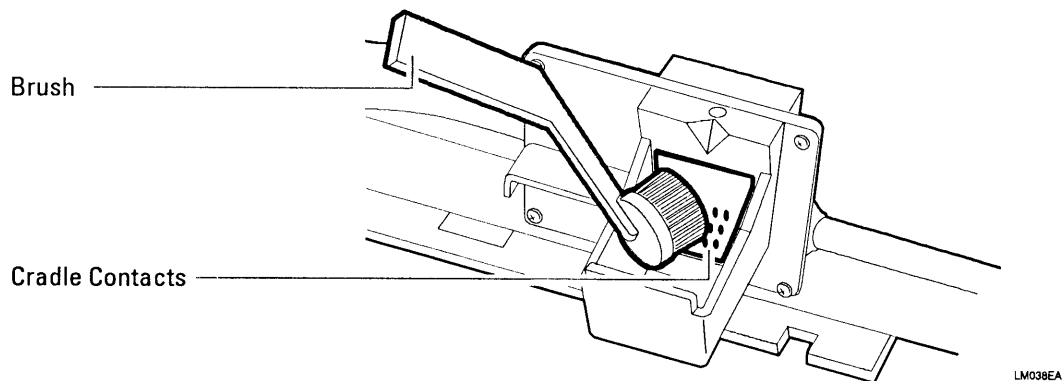
## ***Brushing the Print Cartridge Contacts***

The print cartridge contacts will need to be brushed when the print cartridge cradle will not move to the "home" position when you press the Print Cartridge button. Use the steps below.

1. Open the printer's top cover.
2. Press the Print Cartridge button on the printer control panel.
3. Remove the print cartridge, following the instructions in "Changing Print Cartridges" in chapter 1 of this user's guide.
4. Remove the brush from the storage container.
5. Brush the contacts on the print cartridge as shown below. *Do not brush the ink nozzles of the print cartridge.*



6. Brush the contacts on the print cartridge cradle as shown.
7. Re-install the print cartridge and print the page again.



If the problem doesn't improve, replace the print cartridge with a new one.

### ***Removing Dried Ink from Black Print Cartridges***

If a black print cartridge is exposed to air for an extended period of time, a layer of dried ink will form a crust on the nose of the print cartridge. If this occurs, do not install the print cartridge in your printer.

Follow the steps below to remove the dried ink from the nose of the print cartridge.

#### ***Caution***

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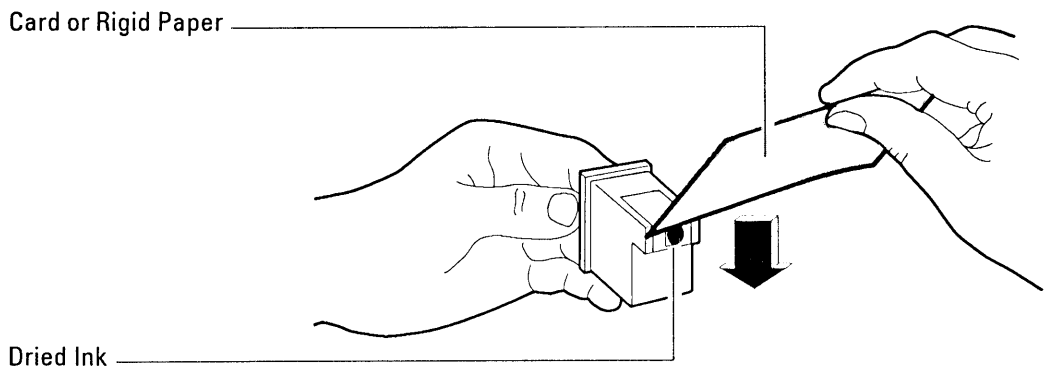
Ink may stain hands or clothing.

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1. Grasp the print cartridge by the green cartridge top.

2. Hold the print cartridge over a waste can so that the nose of the print cartridge is pointed toward the waste can.
3. Gently scrape the dried ink with the edge of a 3 in. x 5 in. index card or other rigid paper stock so that the dried ink falls into the waste can. *Do not use the brush to remove dried ink from print cartridge.*
4. When all the dried ink has been removed, install the print cartridge in your printer.



5. Clean the print cartridge by pressing the Clean button
6. Try printing a document with the print cartridge. Evaluate the print quality. If the print cartridge has been left out too long, it may not recover and it will need to be replaced.

**NOTE**

Always store print cartridges in the printer's print cartridge cradle or in the print cartridge storage container. Leaving print cartridges out on your desk exposes them to air, causes the ink to evaporate and degrades the print quality.

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# Notes

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# Notes