



DeskJet 500C Printer

User's Guide

Manual Part Number
C2114-90021

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Regulatory Notices

Potential for Radio/Television Interference (USA only)

The DeskJet 500C printer generates and uses radio frequency energy and may cause interference to radio and television reception. Your printer complies with the specifications in Subpart J of Part 15 of the Federal Communications Commission rules for a Class B computing device. These specifications provide reasonable protection against such interference in a residential installation. However, there is no guarantee that interference will not occur in a particular installation. If the printer does cause interference to radio or television reception, which can be determined by turning the printer off and on, you can try to eliminate the interference problem by doing one or more of the following:

- Reorient the receiving antenna.
- Reorient the position of the printer with respect to the receiver.
- Move the printer away from the receiver.
- Plug the printer into a different outlet so that the printer and receiver are on different branch circuits.

If necessary, consult an authorized HP dealer or an experienced radio/television technician for additional suggestions. You may find the following booklet, prepared by the Federal Communications Commission, helpful: *How to Identify and Resolve Radio/TV Interference Problems*. This booklet is available from the U.S. Government Printing Office, Washington, D.C. 20402, Stock No. 004-000-00345-4.

To comply with FCC rules Part 15J Class B computing device use only shielded interface cables.

Power Module Statement

The power module cannot be repaired; if it is defective it should be discarded or returned to the supplier.

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DECLARATION OF CONFORMITY
according to ISO/IEC Guide 22 and EN 45014

**Manufacturer's name
and address:**

Hewlett-Packard Company
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18110 S.E. 34th Street
Camas, Washington 98607

**Manufacturer's name
and address:**

Hewlett Packard Singapore Pte Ltd
Asia Peripherals Division
1150 Depot Road
Singapore 0410

declares, that the product

Product Name:

DeskJet and DeskWriter Printers

Model Number:

HP C2106A, 2279A, C2113A, C2114A

conforms to the following Product Specifications:

Safety:

IEC 950, First Edition/EN 60950

EMC:

EN55022 Class B
EN55101-2
EN55101-3

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Camas, WA
January 1, 1992



Nilesh Gheewala, Customer Assurance Manager

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Inside this User's Guide

This user's guide offers you information on using the DeskJet 500C printer and its features. The information in this guide is for both first-time users and for users who are already familiar with previous DeskJet Family printers.

Printer setup and installation instructions are provided in the *DeskJet 500C Printer Setup Guide*. Make sure you have setup your printer and established communication before you begin using the printer.

Chapter 1, "Getting to Know Your Printer," offers information on the use and maintenance of the printer. Topics include media handling, letterhead paper and envelope loading, and printer control panel descriptions.

Chapter 2, "Using Your Printer," provides information on how to access the features of your printer.

Chapter 3, "Using Fonts," contains information on fonts and how to select fonts. A sample of a few of the fonts available for the DeskJet 500C printer is also included at the end of the chapter.

Chapter 4, "Troubleshooting," provides steps for solving printing problems.

Appendix A through E provide character set charts, printer command and control code tables, interface cable definitions, ordering information, and product specifications.

The Glossary contains definitions of new or possibly unfamiliar terms used in this user's guide.



Getting to Know Your Printer

This chapter describes media handling, print cartridge use, and periodic printer maintenance.

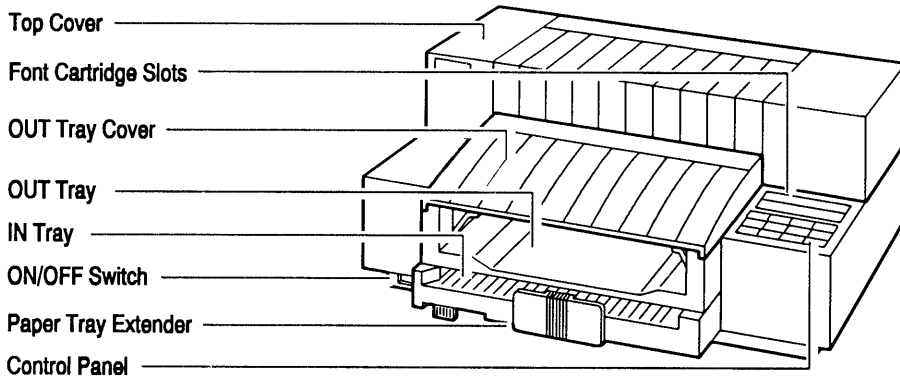
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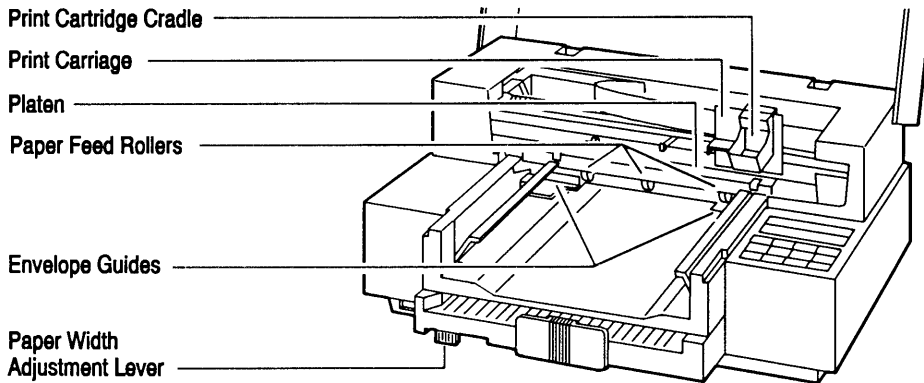
Before you begin to use your printer, make sure you have set it up using the instructions in the *DeskJet 500C Printer Setup Guide*.

Becoming Familiar with Your Printer

Become familiar with the parts of your printer shown below. Doing so will help you as you use the printer.



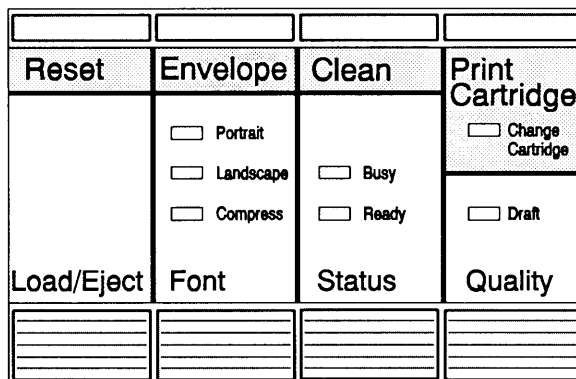
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Using the Printer Control Panel

The DeskJet 500C printer control panel has eight buttons and seven indicator lights. Refer to chapter 4, for information on error light indications.



Quality Button

Pressing the Quality button selects draft or letter quality mode. The printer's default quality mode is letter quality. Select draft quality by pressing the Quality button. *Some software packages may override quality selections made through the printer control panel.*

Draft Light

The Draft light is on when draft quality printing is selected. The Draft light is off when letter quality printing is selected.

Status Button

Pressing the Status button pauses the printer. If the Status button is pressed during printing, the printer will finish printing the line it is on and stop. Pressing the Status button again will cause the printer to be ready for printing. Printing will resume from where it left off with no loss of information.

Ready Light

The printer is ready to receive information from the computer for printing when the Ready light is on. If the Ready light is off, the printer is paused and unable to print.

Busy Light

The Busy light is on when the printer is receiving information to print. When the Busy light is off, the printer is not receiving information. The Font, Status, and Load/Eject buttons are inactive when the Busy light is on.

Font Button

Pressing the Font Button will select the Courier 16.67 pitch font, press the Font button again to select the landscape Courier 10 pitch font, press the Font button a third time to select the landscape Courier 16.67 pitch font, and press the Font button again to return to the default Courier 10 pitch font. You can also select fonts from installed font cartridges by pressing the Font button until the light turns on below the font listed on the cartridge. The Font button is also used to begin a printer self test. Refer to chapter 2 for information on the printer self test.

NOTE

Letter Gothic, CG Times, and some internal Courier fonts (5 and 20 pitch) cannot be selected through the printer control panel. Software or printer commands must be used to select these fonts.

Portrait Light

The Portrait light indicates that the font selected is a portrait oriented font.

Landscape Light

The Landscape light indicates that the font selected is a landscape oriented font.

Compress Light

The Compress light indicates a compressed version of a font has been selected.

Load/Eject Button

Pressing the Load/Eject button loads (advances) paper and media, into the printer or ejects paper from the printer. If printing is complete and the last page does not eject, press the Load/Eject button. Refer to "Using Media in Your Printer" in this chapter for information.

Reset Button

Pressing the Reset button returns the printer to its default settings. Information waiting to print is lost when the Reset button is pressed.

Envelope Button

Pressing the Envelope button loads (advances) an envelope loaded from the OUT tray into the printer for printing. Refer to "Loading Envelopes," in this chapter.

Clean Button

Pressing the Clean button begins cleaning the print cartridge to restore print quality when dots or lines are missing from your printouts. Refer to chapter 4 "Troubleshooting" for additional information.

Print Cartridge Button

Pressing the Print Cartridge button moves the print carriage to the center of the printer, out of the "home" position to change print cartridges. After changing print cartridges, press the Print Cartridge button to return the print carriage to its "home" position.

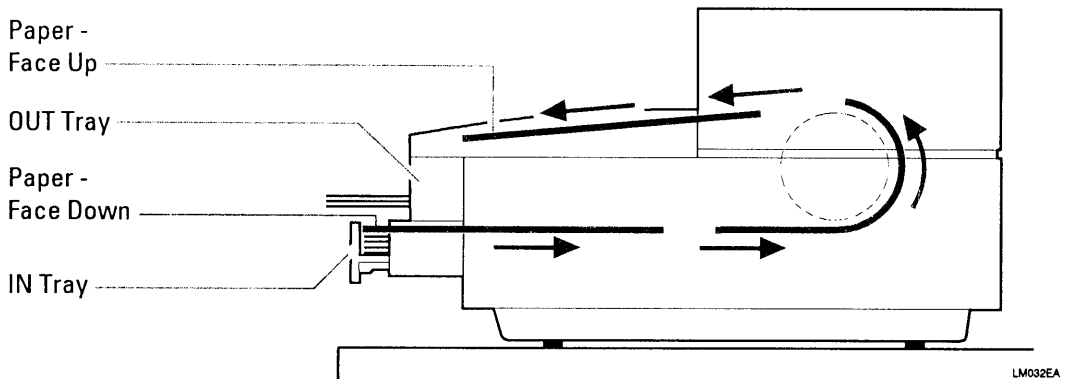
Change Cartridge Light

The Change Cartridge light blinks when the printer is waiting for you to change print cartridges.

The Paper Path

Paper and transparencies are automatically fed through the printer, "print" side face down from the IN tray, around the platen and paper feed rollers, and are delivered face up in the OUT tray.

Envelopes are manually fed (one at a time) through the printer OUT tray, "print" side face down, under the envelope guides, and through the paper path described above.



Using Media in Your Printer

Selecting Your Media

One of the most important things you can do to ensure the best possible performance from your DeskJet 500C printer is to use the paper, transparencies, and envelopes recommended here.

Using Plain Paper

The DeskJet 500C printer was designed to work well with most types of paper, although some variation in paper composition may significantly affect print quality and paper handling. For general applications, most plain paper manufactured for high-quality photocopying yields good results. For applications requiring company letterhead for example, cotton bond paper yields excellent results. You should test paper (printing on both sides) for suitability before you purchase large quantities, ensuring the print quality you desire.

Recommended Media Types

For transparency film (LX JetSeries) and special paper (CX JetSeries) for color printing, use the following:

Media	HP Part Number
CX JetSeries CutSheet Paper (US Letter Size), 200 sheets	51630Y
CX JetSeries CutSheet Paper (A4 European Size) 200 sheets	51630Z
LX JetSeries Transparency Film (US Letter Size) 50 sheets	51636F
LX JetSeries Transparency Film (European A4 Size) 50 sheets	51636G

LX JetSeries transparency film can be used for color and black printing. CX JetSeries CutSheet paper is recommended for color printing only.

As you select paper for your DeskJet 500C printer, be sure to choose only paper in the 16 to 24 lb (60 to 90 g/m²) range. Colored photocopy, bond, and letterhead paper, or preprinted forms that fall within the 16 to 24 lb (60 to 90 g/m²) range may be used in the DeskJet 500C printer. Be sure that all paper you use is free of tears, dust, wrinkles, and curled or bent edges.

NOTE

Plain paper has a "print" side. For the best print quality, print only on the "print" side of the plain paper. The "print" side isn't visible to the naked eye, so before you remove the paper from a ream to use in your printer, check the label on the end of the ream. The "print" side will be indicated by an arrow or other symbol or wording. Remove, undisturbed from the ream, the number of sheets of paper you wish to use in your printer, and load them "print" side face down into your printer's IN tray.

Types of Media to Avoid

- paper greater than 24 lb (90 g/m²) or less than 16 lb (60 g/m²).
- inkjet paper other than the recommended type.
- paper with cutouts or perforations.
- transparency film other than the recommended type.
- multiple part forms.
- paper sizes other than those listed in appendix E.

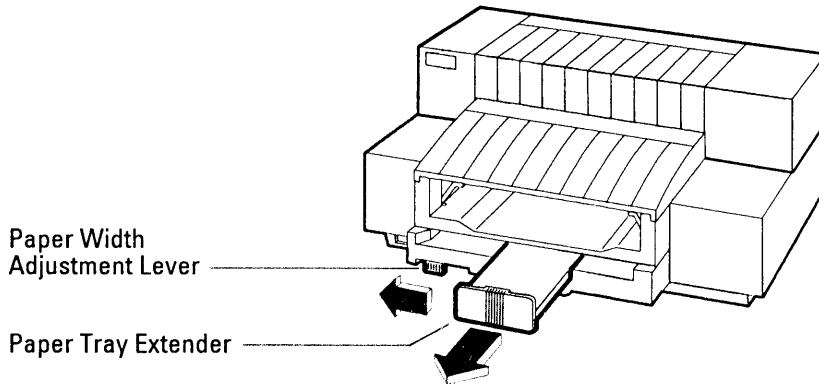
Loading Paper

- 1.** Slide the paper width adjustment lever to the left.

The paper width adjustment lever is located below the left corner of the IN tray.

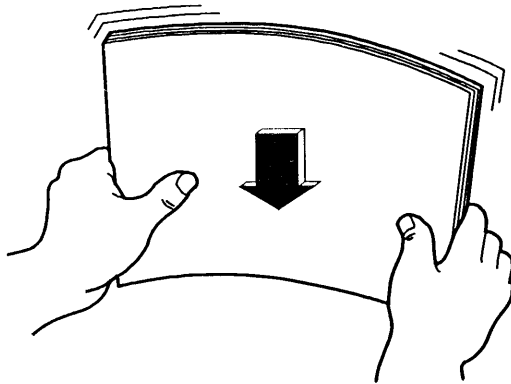
- 2.** Pull out the paper tray extender.

The paper tray extender is located at the center front edge of the IN tray.



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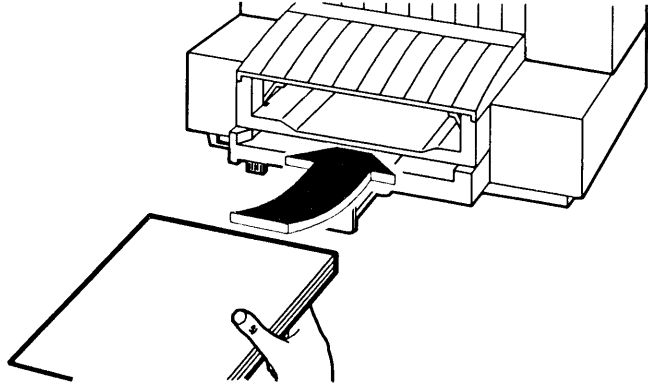
- 3.** Take out a $\frac{1}{2}$ inch (approximately 1 cm) stack of paper (about 100 sheets) and tap the paper edge on a flat surface to even the stack.



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4. Insert the stack of paper squarely into the IN tray, *print side down*.

Make sure the right edge of the paper is aligned against the right wall of the IN tray.



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5. Push the paper tray extender in toward the printer, making sure the paper does not buckle in the IN tray.
6. Slide the paper width adjustment lever to the right, making sure the paper does not buckle in the IN tray.

This will ensure that the right edge of the paper is aligned against the right wall of the IN tray and minimize skewed printing.

If you are using US letter (8 1/2 in. x 11 in.) or legal size (8 1/2 in. x 14 in.) paper, slide the lever back to the left.

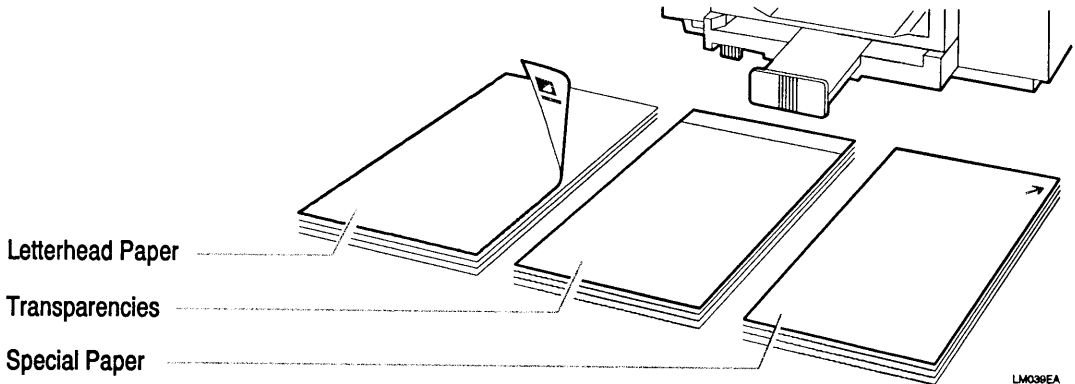
Reloading Paper

When your printer runs out of paper, the Ready light will blink to indicate that the IN tray is empty. Follow the steps in "Loading Paper" and press the Status button on the printer control panel to resume printing. Information waiting to print is not lost unless the printer is turned off when reloading paper or when printing.

Loading Special Media Types

Media loading instructions are essentially the same for plain paper, letterhead, transparencies, and special paper. Be sure to load only one media type in the printer IN tray at a time for best printing results. However, if you are using transparencies and have less than 10 sheets to load, you may need to load the transparencies on top of a stack of paper in the IN tray to ensure proper loading.

Also, always load media *print side face down*. For transparencies, the "rough" side should be loaded face down. Printing on the correct side makes a significant difference in print quality with most media types.



Loading Letterhead Paper Follow the instructions in "Loading Paper," to insert up to a $\frac{1}{2}$ inch (approximately 1 cm) stack of letterhead paper into the IN tray *print side down and letterhead first*. Make sure the right edge of the paper is flush against the right side of the IN tray.

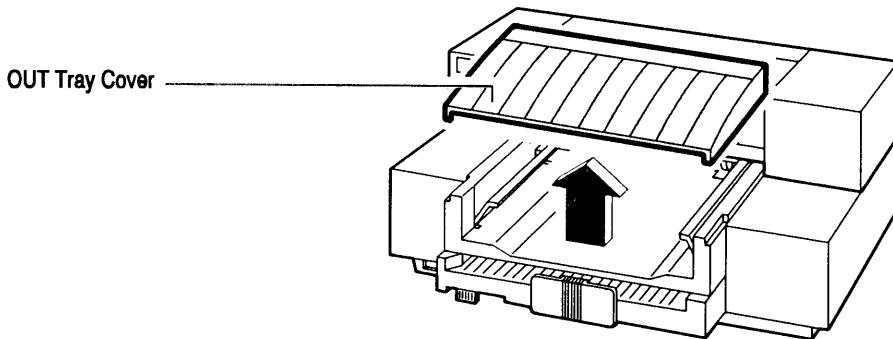
Loading Special Paper Follow the instructions in "Loading Paper," to insert up to a $\frac{1}{2}$ inch (approximately 1 cm) stack of CX JetSeries CutSheet special paper into the IN tray *print side down* with the arrow printed in one corner facing forward. Make sure the right edge of the paper is flush against the right side of the IN tray.

Loading Transparencies Follow the instructions in "Loading Paper," to insert at least 10 sheets of LX JetSeries transparencies into the IN tray *print side down with the adhesive strip edge forward*. The "rough" side of the transparency film is the print side. A stack of at least 10 sheets of transparency film will ensure proper loading, even if you plan to print one transparency. If you have less than 10 sheets to load, you may need to load the transparencies on top of a stack of paper in the IN tray to ensure proper loading. Steps for printing transparencies will vary depending on the software package that you use. Refer to your software manual for information.

Loading Envelopes

Envelopes are manually loaded, one at a time, through the envelope guides located in the printer OUT tray. Be sure to use only No. 10 (US) or DL (European) size envelopes in your DeskJet 500C printer.

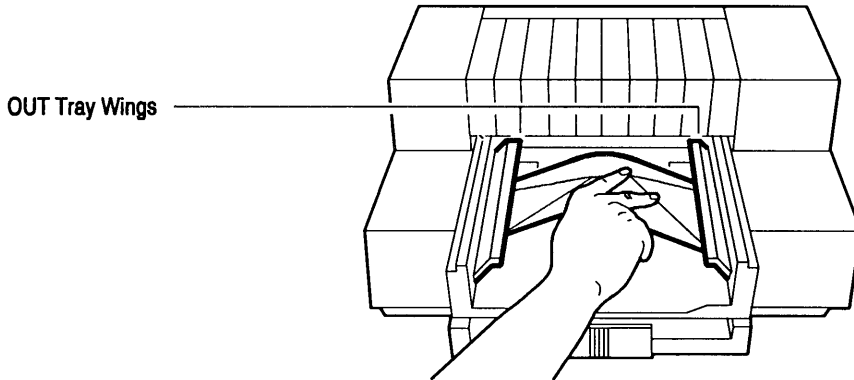
1. Remove the OUT tray cover and set it aside.



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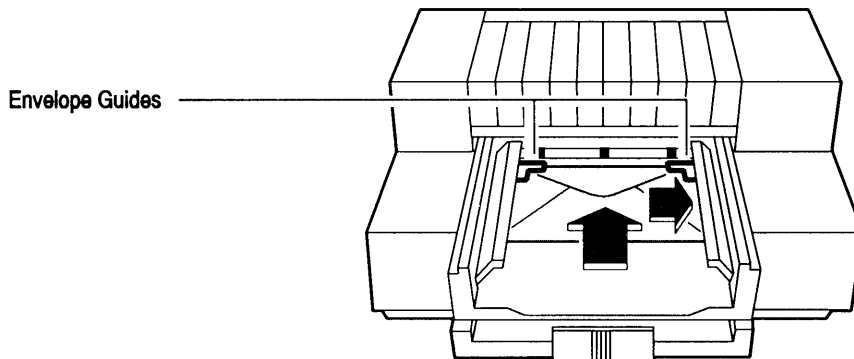
2. Remove any paper from the OUT tray.
3. Hold the envelope with the flap side facing up.

4. Flex the envelope gently at the middle, slip it under the OUT tray wings, and set it, head first, into the OUT tray.



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5. With the right side of the envelope flush against the right side of the OUT tray, push the envelope forward, under the envelope guides and then under the paper feed rollers until the envelope stops.



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6. Press the Envelope button.

The envelope is ready for printing. Since printing envelopes depends on the software application that you are using, refer to your software manual for specific steps to print an envelope using your software.

Using Print Cartridges

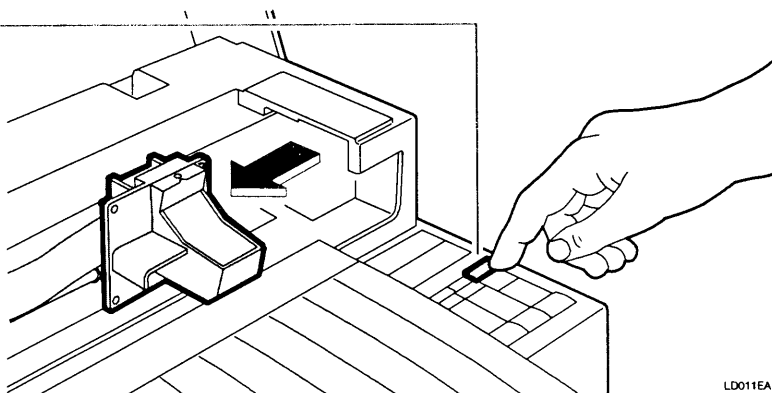
Two print cartridges (one black and one color) were provided with your printer. Since only one print cartridge can be used at a time, a print cartridge storage container was provided with your printer to store the print cartridge that you are not using. Using the storage container ensures that your print cartridges do not dry out or clog when not in use.

Installing a Print Cartridge

Follow the steps below to install a print cartridge.

1. Open the printer's top cover.
2. Turn on the printer.
3. Press the Print Cartridge button on the printer control panel.

Print Cartridge Button



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The print cartridge cradle will move to the center of the printer and pause.

If you are installing a new print cartridge, go to step 4. If you are installing a print cartridge from the print cartridge storage container, go to step 6.

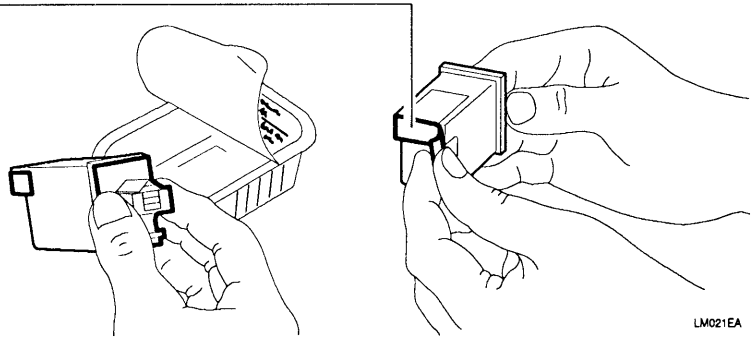
4. Open the print cartridge container. Grasp the print cartridge by the green arrow and remove the print cartridge from its container.

CAUTION

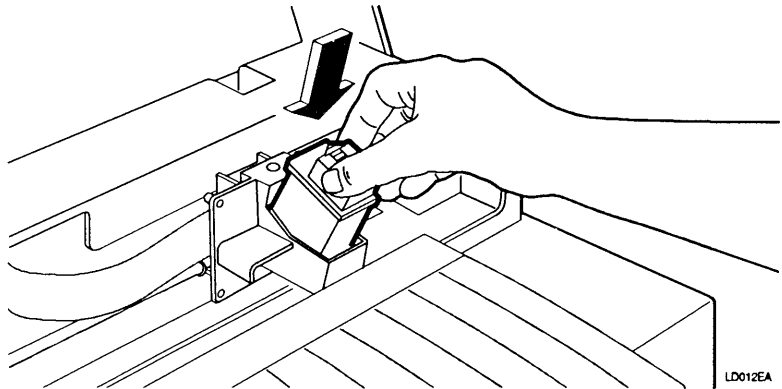
The ink in the print cartridge may be harmful if swallowed. Keep new and used cartridges out of the reach of children. Discard empty cartridges immediately.

5. Gently remove the tape covering the ink nozzles on the print cartridge. *Be careful not to touch the copper ribbon or the ink nozzles.*

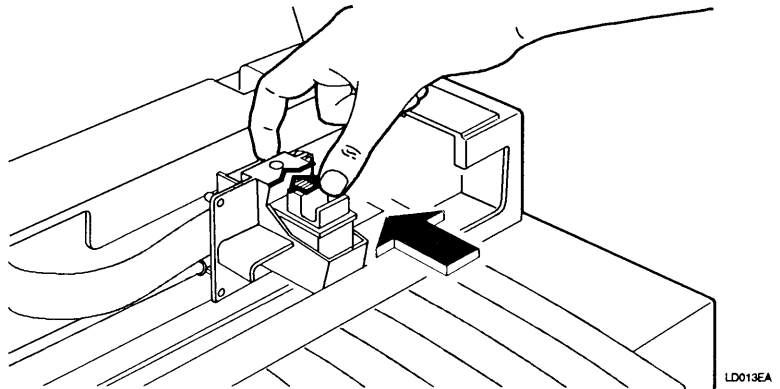
Tape



6. Drop the print cartridge down and forward into the cradle with the green arrow on the cartridge top pointing to the green dot on the top of the cradle.



7. Push the green arrow forward toward the green dot, "snapping" the cartridge into place.



8. Press the Print Cartridge button on the printer control panel. The print cartridge cradle will return to the "home" position.
9. Close the printer's top cover.

NOTE

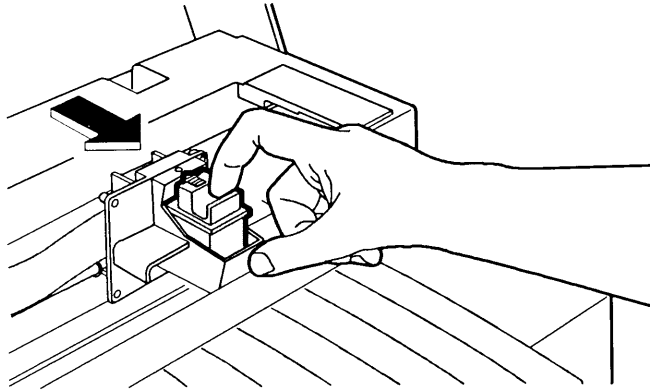
If the print cartridge cradle moves back to the center of the printer and the control panel lights begin to blink, see "Print Cartridge Problems" in chapter 4 of this user's guide.

Changing Print Cartridges

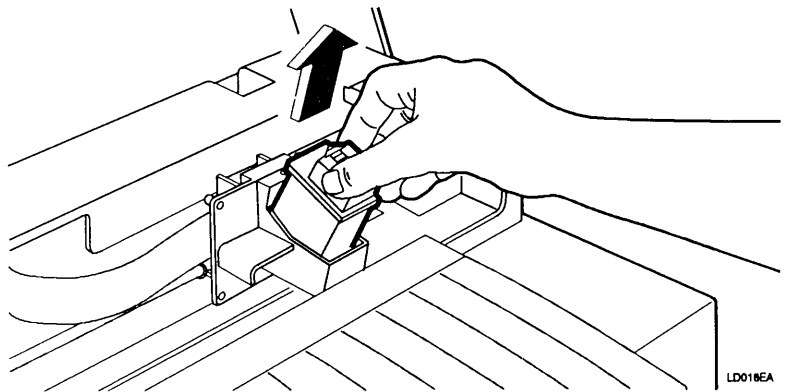
Follow these steps to remove a print cartridge from the cradle and to load a print cartridge from the storage container.

1. Open the printer's top cover.
2. Make sure the printer is on.
3. Press the Print Cartridge button on the printer control panel.

4. Grasp the green cartridge top while placing your thumb on the cartridge cradle. Pull the cartridge top toward you until the cartridge "pops" loose.



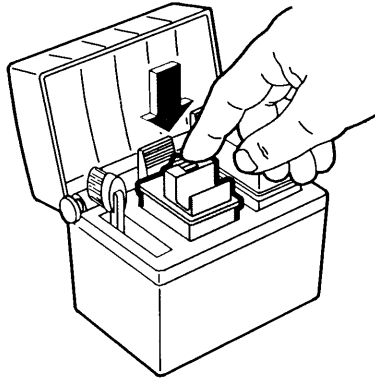
5. Lift the print cartridge out of the cradle.



6. Open the storage container cover.
7. Set the print cartridge in the appropriate storage container cradle with the green arrow on the cartridge top pointing to the cartridge clip.

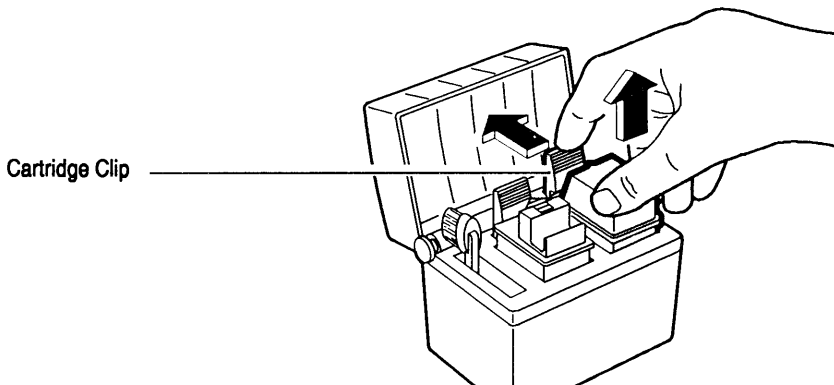
To ensure that the appropriate cradle is used, match the dot(s) on the cartridge clips with the dot(s) on the print cartridge label. A black dot indicates a black print cartridge and three color dots indicates a color print cartridge.

8. Push the print cartridge down, "snapping" the cartridge into place.



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9. Grasp the other print cartridge in the storage container while pressing the cartridge clip back with your index finger.
10. Lift the print cartridge from the storage container cradle.



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11. Close the storage container cover.
12. Insert the print cartridge into the printer following the steps in "Installing a Print Cartridge," earlier in this section.

Print Cartridge Maintenance

To maintain excellent print quality from your print cartridges, follow the tips below:

- Keep print cartridges in their sealed packages until you are ready to use them.
- Store print cartridges at room temperature.
- Keep print cartridges in either the printer or the storage container provided at all times. Leaving the cartridge out on your desk will ruin the print cartridge. Refer to "Print Cartridge Problems" in chapter 4 for information on caring for print cartridge problems.
- Discard empty print cartridges immediately.
- Keep the print cartridge cradle in its "home" position on the right side of the printer when the printer is not in use. Leaving it out of "home" position will ruin the print cartridge. Avoid turning off the printer before printing is complete, or the cradle will be left out of its "home" position.

Using the Print Cartridge Storage Container

A storage container for your print cartridges was provided with your printer. Using this storage container ensures that your print cartridges will not dry out or clog when not in use, prolonging the life of the print cartridges.

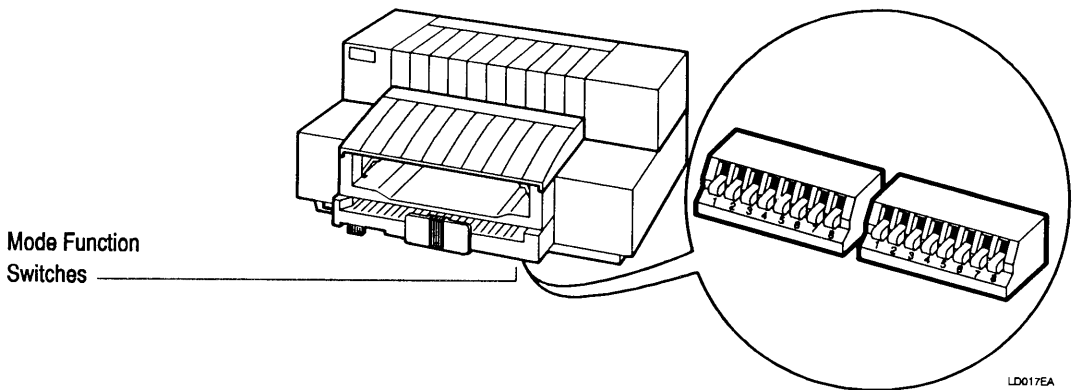
NOTE

Use the brush provided with your print cartridge storage container only to brush the contacts on the print cartridge and the print cartridge cradle. This procedure is described in chapter 4 of this user's guide. Brush the contacts only as described in chapter 4. Do not brush the ink nozzles on the print cartridge. Brushing the ink nozzles will ruin the print cartridge and contaminate the brush with ink.

Using Mode Function Switches

The DeskJet 500C printer has two banks of mode function switches located on the printer's front base, under the IN tray. These switches define a number of default printer settings, ranging from paper size to data communications settings for an RS-232-C serial interface connection.

The illustration below shows the function switches in their factory default positions. Factory default is the settings that are selected on the printer at the factory. The factory default settings are in use unless you manually change the switch settings. In most circumstances, you will not need to change the switch settings.



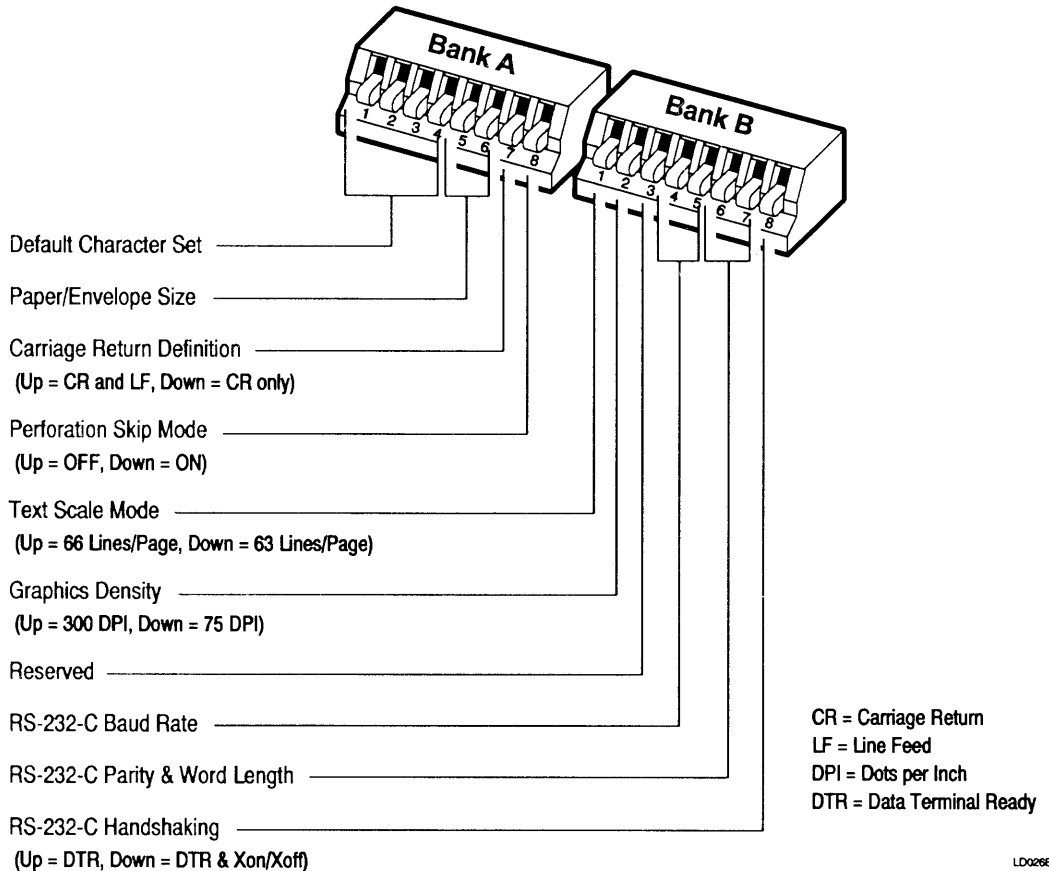
To change the mode function switch settings, use a pen or pencil to flip the switches to the desired (UP or DOWN) position.

NOTE

Settings that you select through your software or printer control panel will override mode function switch settings.

Mode Function Switch Definitions

Definitions for mode function switch settings are shown below. Additional options for selecting character sets, paper/envelope size and RS-232-C serial interface settings are provided on the following pages. Refer to "Using Perforation Skip Mode" and "Using Text Scale Mode" in chapter 2 of this user's guide for additional information.



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*Changing the Text Scale Mode setting to 66 lines/page with switch B1
Up is ignored when Perforation Mode (switch A8 down) is on.*

Changing Default Settings

The table below lists the mode function switch settings for selecting the default character set. The factory default character set is PC-8. Refer to appendix B for additional information on available character sets.

Default Character Set Selection

Character Set	Switch A1	Switch A2	Switch A3	Switch A4
PC-8	down	down	down	down
HP Roman 8	down	down	down	up
PC-8 Danish/Norwegian	down	down	up	down
United Kingdom (ISO 4)	down	down	up	up
Germany (ISO 21)	down	up	down	down
French (ISO 69)	down	up	down	up
Italian (ISO 15)	down	up	up	down
Norwegian v.1 (ISO 60)	down	up	up	up
Swedish Names (ISO 11)	up	down	down	down
Spanish (ISO 17)	up	down	down	up
ASCII	up	down	up	down
Portugese (ISO 16)	up	down	up	up
PC-850	up	up	down	down
ECMA-94 Latin1	up	up	down	up
HP Legal	up	up	up	down
Default set in the Front Font Cartridge Slot	up	up	up	up

The table below lists the mode function switch settings for default paper/envelope sizes. The factory default setting is for U.S. Letter size (8 1/2 x11 in.) paper.

Paper/Envelope Size

Paper/Envelope Size	Switch A5	Switch A6
U.S. Letter Size (8 1/2 in. x 11 in.)	down	down
European A4 (210 mm x 297 mm)	down	up
U.S. Legal (8 1/2 in. x 14 in.)	up	down
Envelope (U.S. No. 10, European DL)	up	up

The following tables list the mode function switch settings for selecting baud rate, parity, and word length for an RS-232-C serial interface connection. Refer to appendix C for information on settings.

RS-232-C Baud Rate Selection

Baud Rate	Switch B4	Switch B5
9600 Baud	down	down
19200 Baud	down	up
2400 Baud	up	down
1200 Baud	up	up

RS-232-C Parity and Word Length

Parity	Word Length	Switch B6	Switch B7
No Parity	8 Data Bits	down	down
Odd Parity	7 Data Bits	down	up
Even Parity	7 Data Bits	up	down
No Parity	8 Data Bits	up	up

Printer Maintenance

Very little maintenance is required to keep your DeskJet 500C printer in top working condition. Perform the following maintenance procedures as necessary.

Exterior Maintenance

Use a soft cloth moistened with water to wipe dust, smudges, and stains off of the printer's case.

Interior Maintenance

The interior of the printer should not be cleaned.

Keep fluids away from the interior of the printer.

Notes

Using Your Printer

This chapter contains information on using the features offered by your printer.

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Setting Default Paper Size	2-5
Setting Margins	2-5
Using Perforation Skip Mode	2-6
Using Text Scale Mode	2-7
Selecting Page Orientation	2-8
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Methods for Selecting Printing Features

The methods for selecting printer features depends on the software package that you use. This section describes the methods you may use to select printer features.

Using Software with Your Printer

After your computer and printer are setup to work together, you will need to setup your software to work with your printer. Software packages control printer features in different ways, some allow you to select features through a menu, while other packages require you to enter printer commands. If you are not sure of the method that your software package uses, refer to the printing section of your software manual for information.

Using your software to select printer features is the easiest and most efficient method because it allows you to have more control of your printer's output. *Software settings always override printer control panel and mode function switches settings.*

NOTE

Access to some printer features, such as font selection and color printing, depend largely on your software. The printer's features may exceed some software package capabilities. Upgrading your software may be required for full access of printer features.

Printer Drivers Each software package may require you to have a specific printer driver installed to be able to print correctly. Printer drivers are files that control the operation of the printer and allow your software access to printer features. When you select options for a document such as italic, your software sends codes indicating your selection to the printer driver. The printer driver interprets the software codes and sends commands to the printer in the printer's language.

Typically, software packages support many printers through different printer drivers. To ensure maximum access of your DeskJet 500C printer features, use a DeskJet 500 printer driver for printing with the black print cartridge or a DeskJet 500C printer driver for printing with the color print cartridge. Refer to the *HP DeskJet 500C Printer Software Information Guide*, for information on choosing and installing printer drivers.

NOTE

Printing problems often occur when an incorrect printer driver is selected. If your printout is incorrect, you should check your software to verify that the appropriate printer driver has been selected. If you have problems with your software and printer, contact your software vendor.

Using Printer Commands

Another method for selecting printer features is through printer commands. A printer command (also known as an escape sequence) directs the printer to perform a task, such as italicizing text. Most software packages do not require you to send printer commands. The software sends the commands for you.

If your software package does not automatically send printer commands, you can enter them directly in your file, or in a menu provided by your software package. Some software packages, refer to printer commands as initialization or setup strings. Printer commands can also be embedded in your file.

HP PCL Printer Language The printer commands in this user's guide conform to HP PCL printer language. The PCL printer language is a standard developed by Hewlett-Packard to ensure compatibility between current and future PCL printers. The DeskJet 500C printer implements HP PCL Level 3 printer language, plus some extensions. Extensions are optional features to the PCL printer language hierarchy which provide flexibility to address specific printing needs. Refer to appendix B for additional information on HP PCL printer commands.

Setup Strings Setup (or initialization) strings are printer commands that are sent to the printer before any other information is sent. Setup strings can be entered as decimal or hexadecimal code, depending on the requirements of your software package. The length of a setup string can be shortened by combining printer commands. Refer to "Combining Printer Commands" in appendix B.

Embedded Printer Commands These are printer commands that you type (embed) into your file. Embedded printer commands can be seen on your screen and may take up space on the screen, but the commands are not printed and do not take up space on the printed document. If your software package allows you to embed printer commands, refer to your software manual for specific instructions.

Other Methods

In addition to using software and printer commands to control printer features, you can use the printer control panel and mode function switches. However, these selections will be ignored if selections are made through software or printer commands.

Setting Default Paper Size

The printer's default paper size is U.S. Letter size. Default paper size can be changed through mode function switches A5 and A6. Refer to "Changing Default Settings" in chapter 1 of this user's guide. Paper size can also be set through software or with printer commands. Both methods will override mode function switch settings.

Setting Margins

This section identifies the variables for setting your margins.

Left and Right Side Margins The leftmost printable position on U.S. Letter and Legal paper is $\frac{1}{4}$ inch (6mm) in from (to the right of) the left edge of the paper. The leftmost printable position on European A4 paper is $\frac{1}{8}$ inch (3mm) in from the left edge. The leftmost printable position on both U.S. No. 10 and European DL envelopes is $\frac{1}{2}$ inch (13mm) in from the left edge of the envelope.

Line Spacing Line spacing is the vertical distance between printed lines on the page. It is measured as number of printed vertical lines per inch (lpi). The default line spacing is 6 lpi.

Top Margin The top margin is the area between the top of the paper and the beginning of the printed text. The first printable line below the top margin is defined as top-of-form. The HP DeskJet 500C printer has a default top margin of $\frac{1}{2}$ inch (13mm) or three lines at 6 lpi with Perforation Skip Mode on. Top margin is set to 0 when Perforation Skip Mode is off. Refer to "Perforation Skip Mode" for more information.

Bottom Margin The bottom margin depends on Perforation Skip Mode and Text Scale Mode settings.

Using Perforation Skip Mode

Perforation Skip Mode controls the top and bottom margins of a page. The area at the top and bottom of a page is called the perforation region. When Perforation Skip Mode is on, you have a $\frac{1}{2}$ inch (13 mm) top margin and a $\frac{1}{2}$ inch (13mm) bottom margin, resulting in a page length of 60 lines. The $\frac{1}{2}$ inch (13mm) bottom margin, referred to as the unprintable area, cannot be printed on. Information entering the unprintable area prints on the next page.

Perforation Skip Mode on (mode function switch A8 DOWN) is the default setting. When Perforation Skip Mode is off (mode function switch A8 UP), the top margin decreases to 0, the unprintable area at the bottom of the page remains at a $\frac{1}{2}$ (13mm) inch, and the page length increases to 63 lines per page. To further increase the page length, refer to "Text Scale Mode" on the next page.

Using Text Scale Mode

Text Scale Mode allows the printer to fit 66 lines of text in 63 lines by scaling the vertical position of the lines on a page. A U.S. Letter size (8 1/2 inch x 11 inch) page has a page length of 66 lines with line spacing at 6 lines per inch.

Text Scale Mode should be used only when printing portrait oriented text. It is ignored when Perforation Skip Mode is on, or when the printer is in landscape orientation or graphics mode. Using Text Scale Mode with merged text and graphics will result in an incorrect printout. The printer's default is Text Scale Mode off, with mode function switch B1 (DOWN). Text Scale Mode is on when switch B1 is in the UP position. A printer command can also be used to turn on Text Scale Mode.

The example below further explains Text Scale Mode.

Example

On an 11 inch page, you have the following parameters.

Line spacing: 6 lpi

Perforation Skip Mode: OFF

Unprintable region: 1/2 inch (3 lines bottom margin)

Page length = 11 in. (66 lines) – 1/2 in. (3 lines) = 10 1/2 in. (63 lines) of printable page length.

You have two options to increase the printable page length.

1. Set the page length in the software package to a value equal to, or less than, the printable page length. In the above example, 63 lines.
2. Turn on Text Scale Mode to print 66 lines within 10 1/2 inches.

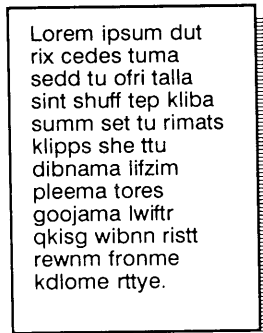
Text Scale Mode is on with mode function switch B1 in the UP position, or when the following printer command:
E_c & k 6 W is sent to the printer.

Avoiding Page Formatting Problems

- Make sure the page length setting in your software is 60 lines per page, when you use the printer's default settings of Perforation Skip Mode on and Text Scale Mode off.
 - Check the printer's mode function switch settings each time you change margin settings in your software to ensure that the software and printer settings are consistent.
 - Always use your software to set margins.
-

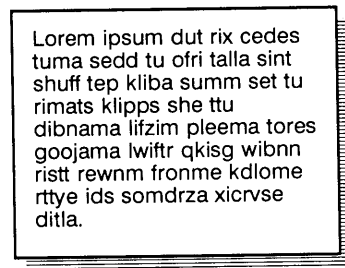
Selecting Page Orientation

Page orientation refers to the way print appears on the page. The DeskJet 500C printer prints in portrait or landscape orientation. Portrait orientation is the printer's default page orientation. The illustrations below show the difference between portrait and landscape orientation.

A rectangular box with a double-line border and a hatched right side, containing text oriented vertically.

Lorem ipsum dut
rix cedes tuma
sedd tu ofri talla
sint shuff tep kliba
summ set tu rimats
klipps she ttu
dibnama lifzim
pleema tores
goojama lwiftr
qkisg wibnn ristt
rewnm fronme
kdlome rtye.

Portrait

A rectangular box with a double-line border and a hatched right side, containing text oriented horizontally.

Lorem ipsum dut rix cedes
tuma sedd tu ofri talla sint
shuff tep kliba summ set tu
rimats klipps she ttu
dibnama lifzim pleema tores
goojama lwiftr qkisg wibnn
ristt rewnm fronme kdlome
rtye ids somdrza xicrvse
ditla.

Landscape

Landscape Orientation

Landscape orientation is selected through the printer control panel, software, or by sending an escape sequence. To use the printer control panel, press the Font button until the Landscape light turns on. Refer to your software manual for information on printing a landscape page.

If you change page orientation during printing, the printer will eject the page and change orientation.

Landscape Fonts Internal fonts available in landscape orientation are Courier 10, 16.67, and 20. Additional fonts are available on the HP 22707L Landscape Fonts cartridge.

Default Paper Size The default paper size in landscape orientation is U.S. letter (8¹/₂ in. x 11 in.). To change the default, refer to "Setting Default Paper Size," in this chapter.

Left and Right Landscape Margins The left margin is ¹/₂ inch (13mm). The left margin can be increased, but it cannot be reduced or eliminated. The maximum value of the right margin is ¹/₆ inch (4mm) from the right paper edge. The printable area between left and right margins on a landscape page is 10 ¹/₃ inches on U.S. letter size paper, and 286mm on A4 size paper.

Top and Bottom Landscape Margins The top and bottom margins on a landscape page have a ¹/₄ inch (3,18 mm on A4 size paper) unprintable area which results in 8 inches of printable area on U.S. letter size paper and 203 mm of printable area on A4 size paper. When Perforation Skip Mode is on, ¹/₄ inch (6 mm) is added to the top and bottom margins. Changing the lines per inch from 6 lpi to 8 lpi and turning Perforation Skip Mode off will increase your printable area. Refer to the following table for information.

When perforation skip is enabled, the top and bottom margins can be changed by sending printer commands. The table below provides additional information.

Lines of Text Per Page

Paper Size	Lines Per Page @		Characters Per Line @		
	6 lpi	8 lpi	10 cpi	16.67 cpi	20 cpi
U.S. Letter	45 (48)*	60 (64)*	103	172	206
European A4	45 (48)*	60 (63)*	110	183	220
U.S. Legal	45 (48)*	60 (64)*	133	222	266

* =Perforation Skip Mode off

lpi=Lines Per Inch (vertical)

cpi=Characters Per Inch (horizontal)

Text Scale Mode has no effect in landscape orientation.

NOTE

If you use fewer than the available lines on a page without sending a form feed command, paper will load in the printer and the Busy light on the printer control panel will blink. Press the Load/Eject button to begin printing.

Landscape Limitations

All control codes and escape sequences behave just as in portrait orientation with two exceptions.

Underlining: Automatic underlining (E_c & d # D) is not supported. Your software package may allow you to underline using another means.

Graphics: Any graphic information sent will be ignored. Reset the printer to return to portrait orientation before sending graphics information.

Page Control Printer Commands

The table below lists the printer commands for controlling a page. Decimal or hexadecimal equivalents of each command are listed in appendix B.

Page Control Printer Commands

Page Control Feature	Printer Command
Enable landscape orientation	E _c & / 1 0
Disable landscape orientation	E _c & / 0 0
Line Spacing (Set Lines Per Inch)	E _c & / # D
Select U.S. Letter paper size	E _c & / 2 A
Select U.S. Legal paper size	E _c & / 3 A
Select European A4 paper size	E _c & / 26 A
Select No. 10 envelope	E _c & / 81 A
Set left margin	E _c & a # L
Set right margin	E _c & a # M
Clear left and right margins	E _c 9
Set top margin	E _c & / # E
Enable Perforation Skip Mode	E _c & / 1 L
Disable Perforation Skip Mode	E _c & / 0 L
Enable Text Scale Mode	E _c & k 6 W
Disable Text Scale Mode	E _c & k 5 W

The technical reference manual contains more detailed information on how to use printer commands. Refer to appendix D for ordering information.

Selecting Color Printing Features

Color printing is available through specific software packages or through the HP DeskJet Series Printer Driver for Microsoft Windows that came with your printer. Refer to the *HP DeskJet 500C Printer Software Information Guide* for color printing information. Color printing features will not be available to you unless you have a specific DeskJet 500C printer driver.

For basic information on color printing, refer to the "*Using Color Guide*" provided with your printer.

The Printer Self Test

The printer self test checks the printer's electronic circuitry and prints a 3 page self test pattern with the black print cartridge installed. A one line self test pattern will print when the color print cartridge is installed.

Use the following steps to print a printer self test.

1. Begin with the printer turned off.
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 reduced example of a 3 page black printer self test is shown on the following page. A sample of the color printer self test and information on solving printer self test problems is contained in chapter 4, "Troubleshooting" of this user's guide.

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