

hp LaserJet 2300
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use

hp LaserJet 2300 series printers

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1 Printer basics

Thank you for purchasing an HP LaserJet 2300 series printer. If you have not done so, see the getting started guide that shipped with your printer for setup instructions.

Now that your printer is set up and ready to use, take a few moments to familiarize yourself with the printer. This section provides information about the following topics:

- "Printer configurations" on page 8
- "Printer features" on page 9
- "Printer software" on page 11
- "Installing the printing system software" on page 16
- "Uninstalling the software" on page 21
- "Control panel" on page 22
- "Interface ports" on page 26

Printer configurations

The hp LaserJet 2300 printer is available in six configurations, as described below.

Note

This illustration in this guide is based on the hp LaserJet 2300 printer model unless otherwise stated. To find out which hp LaserJet 2300 configuration you have, look at the label on the front of the printer.



hp LaserJet 2300.

The hp LaserJet 2300 printer prints letter-size paper or speeds up to 20 pages per minute (ppm) or A4-size paper at up to 19 ppm. It comes with a built-in 250-sheet tray, both parallel and universal serial bus (USB) ports, and 32 megabytes (MB) of random-access memory (RAM). The printer has one print cartridge slot, one Econodome (EO) slot, and two dual inline memory module (DIMM) slots for adding a network print server card, toner, and memory.



hp LaserJet 2300d.

The hp LaserJet 2300d printer is the same as the hp LaserJet 2300 printer, except that the printer comes with 48 MB of RAM and a built-in duplexer (for automatically printing on both sides of paper).



hp LaserJet 2300dn.

The hp LaserJet 2300dn printer is the same as the hp LaserJet 2300 printer, except that it is designed for network printing. It comes with a built-in hp Jetdirect EO print server card (for connecting to 3/10/10base-TX network) and 48 MB of RAM.



hp LaserJet 2300dtn.

The hp LaserJet 2300dtn printer is the same as the hp LaserJet 2300dn printer, except that it also has an additional 500-sheet tray.



hp LaserJet 2300dtndtn.

The hp LaserJet 2300dtndtn printer is the same as the hp LaserJet 2300dtn printer, except that it also has an additional 500-sheet tray.

The hp LaserJet 2300 printer contains the software components listed for end users and network administrators. The printer drivers provided on the cd-rom must be installed to take full advantage of printer features. The other programs are recommended, but are not required for operation. See the hp support website for the latest information and the printer cd-rom for more information.

The cd-rom includes software designed for end users and network administrators operating in the following environments:

- Microsoft® Windows® 95, Windows® 98, and Windows Me (Millennium Edition)
- Microsoft® Windows NT® 4.0
- Microsoft Windows 2000 and Windows XP
- Apple Mac OS version 8.0, 8.1, or 9.0

The most recent software updates for supported operating systems are available at <http://www.hp.com/go/lj2300>. If you do not have access to the internet, see the support flyer that came in the printer box for information about obtaining the most recent software.

Operating systems and printer components



The printer cd-rom contains the software components listed for end users and network administrators. The printer drivers provided on the cd-rom must be installed to take full advantage of printer features. The other programs are recommended, but are not required for operation. See the hp support website for the latest information and the printer cd-rom for more information.

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- Apple Mac OS version 8.0, 8.1, or 9.0

The most recent software updates for supported operating systems are available at <http://www.hp.com/go/lj2300>. If you do not have access to the internet, see the support flyer that came in the printer box for information about obtaining the most recent software.

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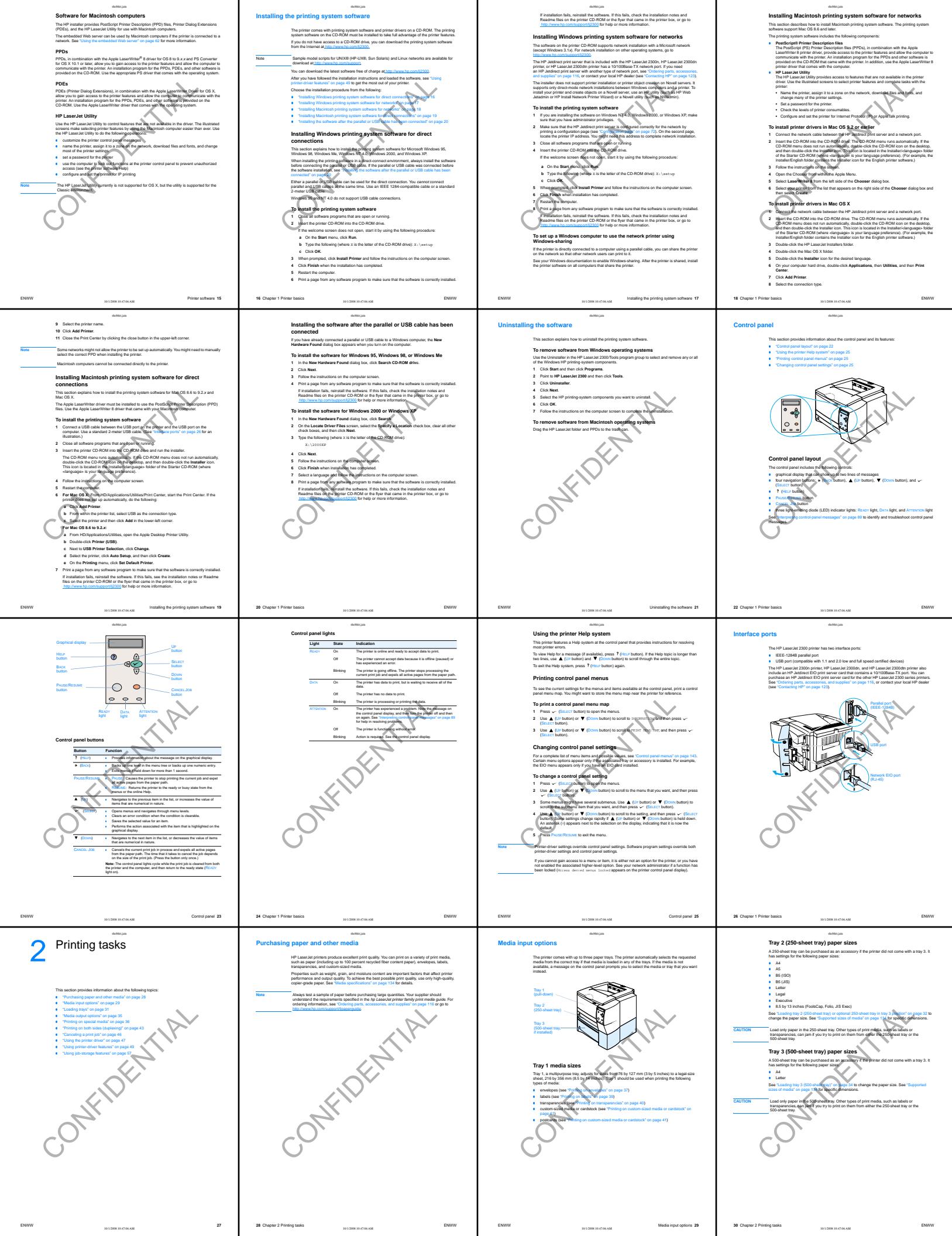
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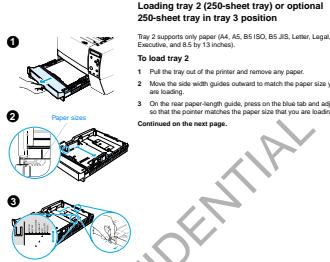
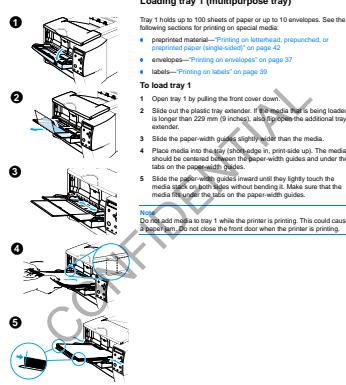
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**Loading tray 2 (250-sheet tray) or optional 300-sheet tray in tray 3 position**

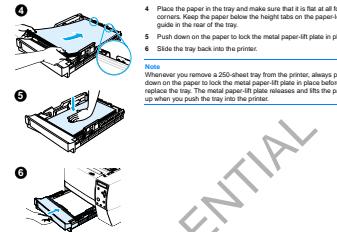
- 1 Tray 2 holds up to 100 sheets of paper or up to 10 envelopes. See the following sections for printing on special media:
 - preprinted material—[Printing on letterhead, prepunched, or printed paper \(single-sided\)](#) on page 42
 - envelopes—[Printing on envelopes](#) on page 37
 - labels—[Printing on labels](#) on page 39

To load tray 2

- 1 Open tray 1 by pulling the front cover down.
- 2 Slide out the plastic tray extender if the media that is being loaded is longer than 220 mm (9 inches) and slide the additional tray extender in.
- 3 Slide the paper width guides slightly wider than the media.
- 4 Place media into the tray (sideways in, print-side up). The media must be flat and centered on the paper width guides and under the tabs on the paper-width guides.
- 5 Slide the paper width guides inward until they lightly touch the media. Make sure the media is flat and centered. Be sure that the media matches the tabs on the paper-width guides.

Note
Do not add media to tray 1 while the printer is printing. This could cause jams. Do not close the front door when the printer is printing.

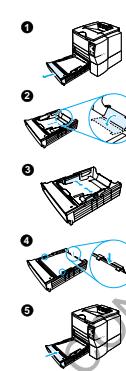
Continued on the next page.

**To remove a 250-sheet tray from the printer**

- 1 Put the tray out of the printer and remove any paper.
- 2 Move the side width guides outward to match the paper size you loaded.
- 3 On the rear paper-length guide, press on the blue tab and adjust it so that the pointer matches the paper size that you are loading.

Note

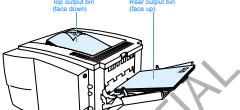
When ever you remove a 250-sheet tray from the printer, always push down on the paper to lock the metal paper-lift plate in place before you rotate the tray extender. When you put the tray back in the printer, always lift up when you push the tray into the printer.

**To load tray 3 (300-sheet tray)**

- 1 Pull the tray out of the printer and remove any paper.
- 2 If you do not have letter-size paper, push on the rear paper stop down.
- 3 For letter-size paper, move the side width guides outward as far as possible.
- 4 Place the paper in the tray and make sure that it is flat at all four corners. Keep the paper below the height tabs on the paper-length guide.
- 5 Slide the tray back into the printer.

Media output options

The printer comes with two output bins. The top output bin is used when the rear output bin is open.



Note
When tray 1 and the rear output bin are closed together, they provide a straight-through paper path for your print job. Using a straight-through paper path sometimes reduce curling.

Printing on special media

- This section discusses printing on types of media that require special handling:
- [Printing on envelopes](#) on page 37
 - [Printing on labels](#) on page 39
 - [Printing on transparencies](#) on page 40
 - [Printing on custom-sized media or cardstock](#) on page 41
 - [Printing on letterhead, prepunched, or preprinted paper \(single-sided\)](#) on page 42

Warning

Printing on envelopes

You can print envelopes from tray 1. Tray 1 holds up to 10 envelopes and supports standard or letter-size envelopes.

For printing on any size of envelope, make sure to set the margins in your program at least 15 mm (0.6 inch) from the edge of the envelope.

The printer might print at a slower speed when printing envelopes. In addition, printing envelopes might affect the life of the printer. Always test a few sample envelopes before purchasing a large quantity. For envelope specifications, see [Envelope](#) on page 139.

Caution

Never use envelopes with coated linings, exposed self-stick adhesives, or other synthetic materials. These items can emit noxious fumes.

Envelopes with clasps, snaps, windows, coated linings, exposed self-stick adhesives, or other synthetic materials can severely damage the printer.

To avoid jamming and possible printer damage, never try to print both sides of an envelope.

Before you load envelopes, make sure that they are flat and not damaged or stuck together. Do not use envelopes with pressure-sensitive adhesive.

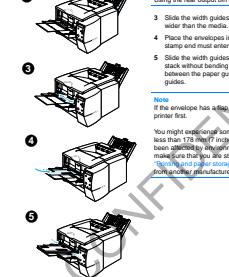
**To load envelopes in tray 1**

Many types of envelopes can be printed from tray 1. Up to 10 can be loaded at one time.

- 1 Open tray 1 by pulling the front cover down.
- 2 Open the rear output bin by pulling down on the top section of the bin. Slide the extender until it extends fully.

Note

Using the rear output bin reduces envelope curl.



- 1 Open tray 1 by pulling the front cover down.
- 2 Open the rear output bin by pulling down on the top section of the bin. Slide the extender until it extends fully.

Note

If the envelope has a flap on the short edge, this edge must enter the printer first.

You might experience some jams when using an envelope with a length less than 178 mm (7 inches). This might be caused by paper that has been folded or crumpled. To prevent jams, flatten the envelope and make sure that you are storing and handling the paper correctly (see [Printing and paper storage environment](#) on page 139). Using media from another manufacturer might also help.

Printing on labels

Use only labels recommended for laser printers. For label specifications, see [Labels](#) on page 141.

Guidelines for printing on labels

- Print labels from tray 1.
- Load labels print-side up.
- Use the rear output bin for labels.
- Remove label sheets from the output bin as they are printed to prevent them from sticking together.
- Do not use labels that are separating from the backing sheet or are wrinkled or damaged in any way.
- Do not use label sheets that have the backing sheet exposed, and do not reuse partially used label sheets.
- Do not feed a sheet of labels through the printer more than once. The adhesive backing is designed for one pass through the printer.



Caution
If a sheet of labels becomes jammed in the printer, see [Clearing jams](#) on page 97.

Printing on transparencies

Use only transparencies recommended for use in laser printers. For transparency specifications, see [Transparencies](#) on page 141.

Guidelines for printing on transparencies

- Print transparencies from tray 1.
- Use the top output bin to reduce curling (this is for transparencies only; for other media use the rear output bin to reduce curling).
- Remove transparencies from the output bin as they are printed to prevent them from sticking.
- Place transparencies on a flat surface after removing them from the printer.
- Set the printer driver for transparencies (see [Transparency type and size of media](#) on page 53).
- For Macintosh computers, set to the HP LaserJet Utility and select transparencies.

**Printing on transparencies**

The printer comes with two output bins. The top output bin is used when the rear output bin is open.

Label orientation

print-side up, top edge toward the printer.

Caution

If a sheet of labels becomes jammed in the printer, see [Clearing jams](#) on page 97.

Print on both sides (duplexing)

You can print on both sides of a sheet of paper (called duplexing or two-sided printing) in two ways—automatic and manual. Letter A4, and 8.5 by 13 inches, and Legal paper sizes are supported for duplexing.

Automatic duplexing
The HP LaserJet 2300t, HP LaserJet 2300n, and HP LaserJet 2300tn printers contain a built-in duplex that can automatically print on both sides of paper.

Manual duplexing
You can perform manual duplexing for the HP LaserJet 2300L, HP LaserJet 2300, and HP LaserJet 2300n printers. Load the paper with the short edge toward the printer so that you can insert the paper into the printer, and then print the second side of each page. Some documents cannot be printed while the printer waits for you to insert the paper for the second side.

Even if your printer includes a built-in duplex, manual duplexing is necessary for the following:

- If you want to duplex paper other than the supported sizes or weights—for example, paper heavier than 105 g/m² (28 lb) or very thin paper
- If you select **Straight Paper Path** in your printer driver

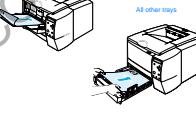
Guidelines for printing on both sides

Do not print on both sides of labels, glossy paper, or vellum. Damage to the printer and jams might result.

Paper orientation for printing on both sides

Duplex on the second side of the sheet of paper first. The paper needs to be oriented as shown in the following illustration.

- For tray 1, load the first side facing down with the bottom, short edge toward the printer.
- For all other trays, load the first side facing up with the top, short edge toward the printer.



The four print-orientation options are shown below. These options are available when **Print on Both Sides** is selected from the Finishing list in the printer driver.

- 1 **Flip Pages Up (long-edge landscape)**
This layout is often used in accounting, data processing, and spreadsheet applications. Every other printed image is rotated 180 degrees. Facing pages are read continuously from top to bottom.
- 2 **Flip Pages Up (short-edge landscape)**
Each printed image is oriented right-side up. Facing pages are read from top to bottom on the left page, then from top to bottom on the right page.
- 3 **Flip Pages Upward (long-edge portrait)**
This layout is often used in common layout, with every printed image oriented right-side up. Facing pages are read from top to bottom on the left page, then from top to bottom on the right page.
- 4 **Flip Pages Up (short-edge portrait)**
This layout is often used with documents. Every other printed image is oriented upside-down. Facing pages are read continuously from top to bottom.

Layout options for printing on both sides

The four print-orientation options are shown below. These options are available when **Print on Both Sides** is selected from the Finishing list in the printer driver.

Print on both sides (duplexing)

The printer is included with the HP LaserJet 2300t printer, the HP LaserJet 2300n printer, and the HP LaserJet 2300tn printer.

- 1 Insert enough paper into one of the trays to accommodate the print job. If you are loading specialty paper such as letterhead, load it in one of the following ways:
 - For tray 1, load letterhead print-side up with the top edge toward the printer.
 - For tray 2, load letterhead print-side up with the top edge toward the back of the tray.
- 2 For tray 2 (250-sheet tray) or tray 3 (either a 250-sheet tray or a 300-sheet tray), load the letterhead paper with first page on top edge toward the back of the tray.

CAUTION
Do not load paper that is heavier than 105 g/m² (28 lb) bond. Jamming could result.

- 3 Open the printer driver (see [Changing the settings for a print job](#) on page 47).

3 On the Finishing tab, select **Print on Both Sides**.

4 Click **OK**.

5 Send the print job to the printer.

During duplexing, the duplex will not function if the rear output bin is open.

To duplex manually

1 Insert enough paper into one of the trays to accommodate the print job. If you are loading specialty paper such as letterhead, load it in one of the following ways:

- For tray 1, load letterhead print-side up with the top edge toward the printer.
- For tray 2 (250-sheet tray) or tray 3 (either a 250-sheet tray or a 300-sheet tray), load the letterhead pages with first page on top edge toward the back of the tray.

- 2 Open the printer driver (see [Changing the settings for a print job](#) on page 47).

3 On the Finishing tab, select **Print on Both Sides**.

4 Click **OK**.

5 Select the print job in the printer.

- 6 Go to the printer. Remove any blank paper from tray 1. Insert the printed stack with the blank side up, top edge in first. You must print the second side from tray 1.

7 If prompted by a message at the control panel display, press **SELECT**.

Note
If total sheets exceed the tray 1 capacity for manual duplex jobs, you must repeat steps 6 and 7 each time paper is inserted until the duplexing job is complete.

Cancelling a print job

You can stop a print job from a software program or a print queue, or by pressing the **CANCEL** button on the printer control panel.

- If the printer has not started printing, first try to cancel the job within the software program that is sending the print job.
- If the print job is already printing, press the **CANCEL** button. The printer will cancel the print job.

If the control panel status lights continue to cycle after a job has been canceled, the computer is still sending the job to the printer. Either delete the job from the print queue or wait until the computer has finished sending data (the ready light on the **READY** button will return to the ready color, or the **READY** light on the control panel display will stop blinking).

Pressing **CANCEL** cancels only the current job in the printer. If more than one print job is in printer memory, **CANCEL** must be pressed once for each job.

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The printer driver provides access to the printer features and allows the computer to communicate with the printer. This section provides instructions for printing when setting options are set from the printer driver.

If possible, try to set printing features from the software program in which you are working or from the Print dialog box. You can set the printer features this way for most Windows and Macintosh operating systems. If these features are not available in the software program or printer driver, you must set it at the printer control panel.

For more information about printer-driver features, see the printer-driver online Help. For more information about printing from a specific software program, see the documentation for the program.

Note Printer-driver settings override control panel settings. Software program settings override both printer-driver settings and control panel settings.

Changing the settings for a print job

If you want printing settings to be used only in the software programs you are using, change the settings from the program. After you quit the program, the printer settings return to the defaults that are configured in the printer driver.

To change print settings for a print job on Windows computers

- 1 In the software program, click File.
- 2 Click Print.
- 3 Click Setup or Properties. (The options might be different for your program.)
- 4 Change the print settings.
- 5 When you are finished, click OK.

To change print settings for a print job on Macintosh computers

- 1 In the software program, click File.
- 2 Click Print.
- 3 In the dialog box that appears, select the print settings that you want to change and make the changes.
- 4 When you are finished, click OK.

To change print settings for a print job on Macintosh computers

- 1 In the software program, click File.
- 2 Click Print.
- 3 In the dialog box that appears, select the print settings that you want to change and make the changes.
- 4 When you are finished, click OK.

Using EconoMode (draft) printing

EconoMode (draft) printing allows the printer to use less toner on each page. Selecting this option will extend the life of your print cartridge and reduce your cost per page, but will reduce print quality.

EconoMode is not available if you are using a non-HP print cartridge.

To use EconoMode (draft) printing on Windows computers

- 1 Open the printer driver (see "Changing the settings for a print job" on page 47).
- 2 On the Paper/Quality tab, select EconoMode.
- 3 Click OK.

Choosing print-quality settings

If you need advanced print quality, you can choose custom settings.

Resolution options:

- Best Quality—use Photo 1200 for the best print quality.
- Faster Printing—use FastRes 1200 as an alternative resolution for complex graphics or documents.
- Custom—use this option to specify print-quality settings.

Note Changing resolution can change the performance of your test.

To choose print-quality settings on Windows computers

- 1 Open the printer driver (see "Changing the settings for a print job" on page 47).
- 2 On the Finishing tab, adjust the resolution or print-quality settings that you want.
- 3 Click OK.

Note Changing resolution can change the performance of your test.

Using printer-driver features

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If you want printing settings to be used in all software programs you use on the computer, change the default settings in the printer driver.

Choose the procedure for your operating system:

- "To change default settings in Windows 95, Windows 98, and Windows Me" on page 48
- "To change default settings in Windows 2000 and Windows XP" on page 48
- "To change default settings in Macintosh operating systems" on page 48

To change default settings in Windows 95, Windows 98, and Windows Me

- 1 Click the Start button.
- 2 Point to Settings.
- 3 Click Printers.
- 4 Right-click the HP LaserJet 2300 series printer icon.
- 5 Click Properties.
- 6 Change any of the settings on the tabs. These settings are now the defaults for the printer.
- 7 Click OK to save your settings and to close the printer driver.

To change default settings in Windows 98 and Windows ME

- 1 Click the Start button.
- 2 Point to Settings.
- 3 Click Printers.
- 4 Right-click the HP LaserJet 2300 series printer icon.
- 5 Click Document Defaults.
- 6 Change any of the settings on the tabs. These settings are now the defaults for the printer.
- 7 Click OK to save your settings and to close the printer driver.

To change default settings in Windows 2000 and Windows XP

- 1 Click the Startbutton.
- 2 Point to Settings.
- 3 Click Printers.
- 4 Right-click the HP LaserJet 2300 series printer icon.
- 5 Click Properties.
- 6 On the Advanced tab, click Printing Defaults.
- 7 Change any of the settings on the tabs. These settings are now the defaults for the printer.
- 8 Click OK to return to the Advanced tab.
- 9 Click OK to save your settings and to close the printer driver.

To change default settings in Macintosh operating systems

Depending on the Macintosh operating system version that you have, use either the Apple Desktop Printer Utility or the Print Center to change printer driver defaults.

This section provides instructions for common printing features that are controlled through the printer driver.

Choose the procedure for your operating system:

- "To print a watermark on Windows 95, Windows 98, and Windows ME" on page 49
- "Printing multiple pages on one sheet of paper" on page 50
- "Setting a custom paper size" on page 50
- "Using EconoMode (draft) printing" on page 51
- "Using the separator page" on page 51
- "Using reduce/enlarge options" on page 52
- "Selecting a paper source" on page 52
- "Printing by type and size of media" on page 53
- "Adding a blank page to the beginning of all print jobs" on page 54
- "Adding a blank page to the beginning of all print jobs (job separator page)" on page 54
- "Adding a blank page to the end of a print job" on page 55
- "Deleting a private job" on page 56
- "Deleting a held job" on page 56
- "Managing and maintaining the printer" on page 57
- "Using the embedded Web server" on page 59

To print a watermark on Windows computers (all versions)

- 1 Open the printer driver (see "Changing the settings for a print job" on page 47).
- 2 On the Effects tab, select a watermark from the Watermarks drop-down list. To edit or create a watermark, click Edit.
- 3 Click OK.

To print a watermark on Macintosh computers

Select Custom and specify the text that you want, depending on your printer-driver version.

This section provides instructions for common printing features that are controlled through the printer driver.

Choose the procedure for your operating system:

- "To print a watermark on Windows computers (all versions)" on page 49
- "Printing multiple pages on one sheet of paper" on page 50
- "Setting a custom paper size" on page 50
- "Using EconoMode (draft) printing" on page 51
- "Using the separator page" on page 51
- "Using reduce/enlarge options" on page 52
- "Selecting a paper source" on page 52
- "Printing by type and size of media" on page 53
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- "Adding a blank page to the end of a print job" on page 55
- "Deleting a private job" on page 56
- "Deleting a held job" on page 56
- "Managing and maintaining the printer" on page 57
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To print a watermark on Macintosh computers

Select Custom and specify the text that you want, depending on your printer-driver version.

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Run a printer cleaning page to keep the fuser free of toner and paper particles that can sometimes accumulate on the fuser. A printer cleaning page is also available to appear on the front or back of your print job. (See "Print a review" on page 104.)

To ensure optimum print quality, HP recommends that you use the cleaning page every time that you replace the print cartridge or any automatic internal part that you can see.

The printer prints a page every 2.5 minutes to complete a "Maintenance" cycle. (See "CLEANING FUSER OR CLEANING" on page 104.)

Run a printer cleaning page to work properly, print the page on copier-grade paper (not bond, heavy, or glossy paper).

1 If your printer model includes a duplexer, open the rear output bin.

2 Press **▼ (Select) button** to open the menus.

3 Use **▲ (Up) button** or **▼ (Down) button** to scroll to **PRINT QUALITY**, and then press **▼ (Select) button**.

4 Use **▲ (Up) button** or **▼ (Down) button** to scroll to **CLEANING PAGE**, and then press **▼ (Select) button**.

5 Use **▲ (Up) button** or **▼ (Down) button** to scroll to **CHEAT CLEANSING PAGE**, and then press **▼ (Select) button**.

6 Follow the instructions on the cleaning page to complete the cleaning process.

7 If your printer model includes a duplexer, close the rear output bin.

To run the cleaning page

In order for the cleaning page to work properly, print the page on copier-grade paper (not bond, heavy, or glossy paper).

1 If your printer model includes a duplexer, open the rear output bin.

2 Press **▼ (Select) button** to open the menus.

3 Use **▲ (Up) button** or **▼ (Down) button** to scroll to **PRINT QUALITY**, and then press **▼ (Select) button**.

4 Use **▲ (Up) button** or **▼ (Down) button** to scroll to **CLEANING PAGE**, and then press **▼ (Select) button**.

5 Use **▲ (Up) button** or **▼ (Down) button** to scroll to **CHEAT CLEANSING PAGE**, and then press **▼ (Select) button**.

6 Follow the instructions on the cleaning page to complete the cleaning process.

7 If your printer model includes a duplexer, close the rear output bin.

4 Problem solving

This section will help you troubleshoot and solve minor printer problems.

- **"Troubleshooting checklist"** on page 82
- **"Troubleshooting general printing problems"** on page 83
- **"Understanding printer messages"** on page 88
- **"Cleaning jams"** on page 97
- **"Troubleshooting print-quality problems"** on page 102
- **"Troubleshooting print problems"** on page 107
- **"Troubleshooting common Windows problems"** on page 108
- **"Troubleshooting common Macintosh problems"** on page 109
- **"Troubleshooting common PostScript problems"** on page 114

Troubleshooting checklist

If the printer is not responding properly, complete the following checklist in order. If the printer does not pass a step, follow the corresponding troubleshooting suggestions.

Make sure that the printer **READY** light is on.

If no lights are on, check the power connections. Check the power source by plugging another computer into the same outlet.

If other lights are on, note the message in the control-panel display and follow the troubleshooting steps.

Print a short document from a software application to verify that the computer and printer are communicating correctly.

If the problem persists, check these troubleshooting sections:

- **"Printer does not respond when you select Print in the software."**
- **"Printer is not in manual feed mode."**
- **"The cable between the computer and the printer is not receiving a clear signal."**
- **"The wrong driver was selected in the software."**
- **"The software program is malfunctioning."**
- **"The printer is not receiving power."**
- **"The printer is malfunctioning."**

Troubleshooting general printing problems

Symptom	Possible cause	Solution
Control panel display is held to read.	The contrast is too high or too low for your office environment.	Adjust the contrast on the control panel display (see "Controlling contrast" on page 114).
Printer selects media from the wrong tray.	The tray selection in the software application might be incorrect.	For many software applications, the tray selection is found under the "File" menu or "Print" menu.
Printer does not pull paper from tray 2 or tray 3.	The configured size does not match the size of the media you are trying to print.	Change the configured size to match the size of the media you are trying to print through the control panel.
Paper curls when it exits the printer.	The paper length is set to "auto" and the paper type is set to "plain".	The paper length must be set to "200 sheet tray 2" or "200 sheet tray 3" (see "Paper length" on page 34). For tray 3, make sure that the media type is set to "bond" and that the paper weight is even. An uneven curve can prevent the paper from exiting the printer.
Paper jams within the printer.	A combination of high humidity and high temperature is affecting the media.	Adjust the printer for high humidity and high temperature (see "Media selection" on page 102).

Symptom	Possible cause	Solution
Print job is extremely slow.	The job might be very complex. The maximum speed of the printer cannot handle the complexity. If more memory is added, the print job might run faster.	Print the job on a lower priority. If the job is automatically reduced when printing on a lower priority, add memory to the printer.
You are printing a PDF or PostScript (PS) file using a PCL printer driver.	The printer is not the right printer rather than the PCL printer driver.	Try using the PS printer driver rather than the PCL printer driver.
In the printer driver, Optimize for is set to "carstock, heavy, or bond paper".	The printer is set to the type of paper that it is not receiving a clear signal.	In the printer driver, set the type to "bond" and the weight to "200 sheet tray 2" or "200 sheet tray 3" (see "Paper length" on page 34). Turn over the paper that you plan to print. Reprint the job using Heavy Media. For best results leave the original driver set to heavy even though the paper is not heavy.
Print job prints on both sides of the paper.	The printer is set for duplexing.	See "Changing the settings for a print job" on page 102 or "Using the online Help" on page 103.
Print job contains only one page.	The printer has set duplexing to always print on both sides of the page, the printer processes the back side of the page before it prints the front page.	The printer has set duplexing to always print on both sides of the page, the printer processes the back side of the page before it prints the front page. Come to the front of the printer and turn over the paper that you plan to print. Reprint the job using Heavy Media.
Pages print, but are blurry.	The leading tape might still be in the print cartridge.	Remove the print cartridge and pull the leading tape. Reinsert the print cartridge.
The file might have blank pages.	The file might make sure that it does not contain blank pages.	Check the file to make sure that it does not contain blank pages.

Understanding printer messages

Printer messages appear on the printer control panel display to relay the normal status of the printer (such as "Processing") or to alert you to a problem (such as "No paper"). Most printer messages are temporary and are cleared when the printer is operating normally. Some printer messages are permanent and require attention or that might raise questions. Messages are listed in alphabetical order first, with numeric messages at the end of the list.

Using the printer online Help system

This printer features an online Help system on the control panel that provides instructions for resolving printer errors and temporary control-panel messages alternate with instructions for gaining access to the online Help system.

Whenever a message alternates with **For help press ?**, press **?** (Help) to view the help and use **▲ (Up) button** and **▼ (Down) button** to scroll through the message.

To see the online system, press **? (Help)**.

Resolving persistent messages

Some messages (for example, requests to load a tray or a message that a previous print job is still in the printer) are persistent and will remain until you take action to resolve the message.

If a message persists after performing all of the recommended actions, contact an HP-authorized service or support provider. (See "Contacting HP" on page 123.)

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This printer features an online Help system on the control panel that provides instructions for resolving printer errors and temporary control-panel messages alternate with instructions for gaining access to the online Help system.

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If a message persists after performing all of the recommended actions, contact an HP-authorized service or support provider. (See "Contacting HP" on page 123.)

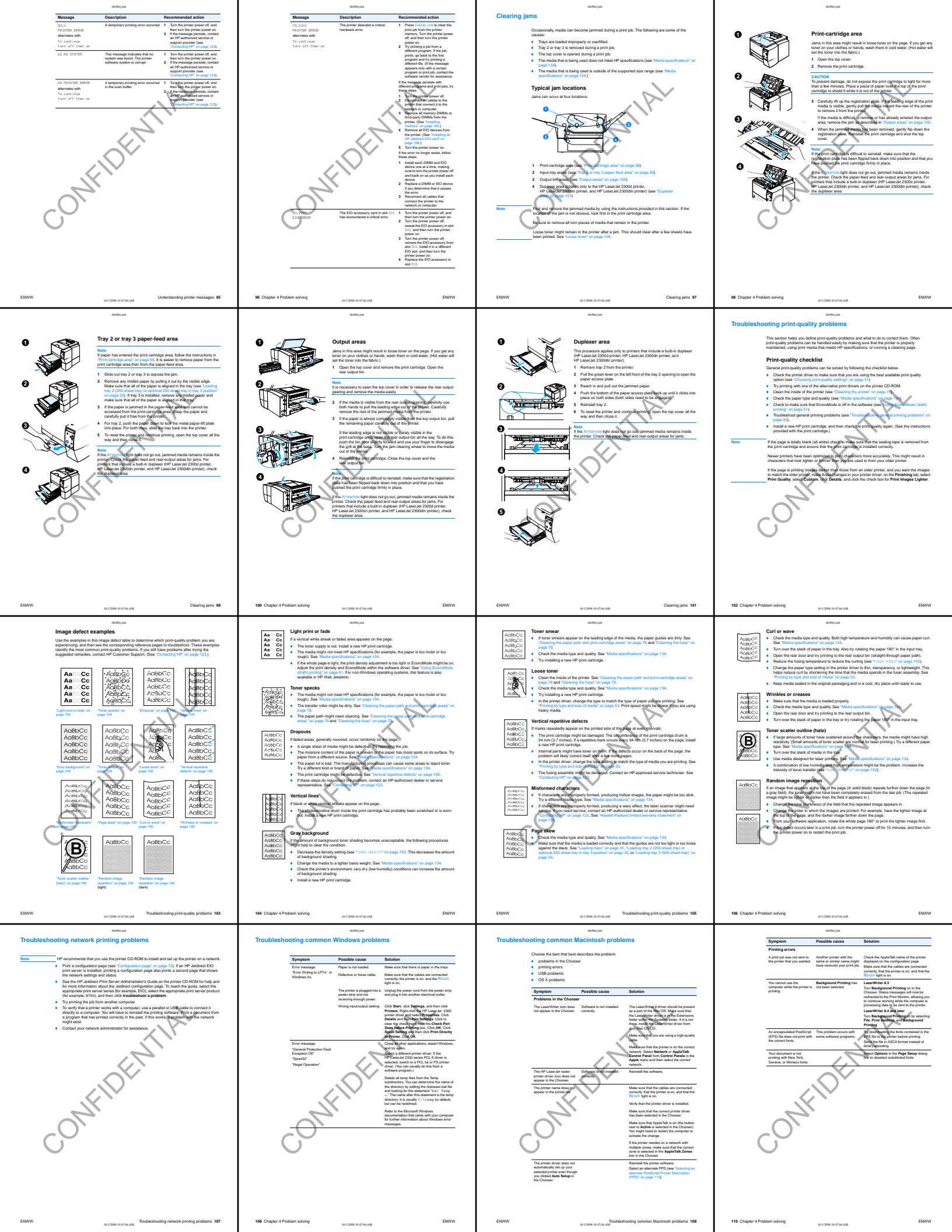
Message	Description	Recommended action
TYPE INSTRUCTION TRAY 2/DUPLEXER alternates with For help press ?	The system detected a different type of media than the type indicated in the printer's media path coming from the tray.	1 Verify that the correct media is selected in the tray. 2 Check the settings to make sure that the media type is set to "auto". 3 Check the media type settings in the printer driver to make sure that the printer is set to the correct media type. 4 Refer to the printer software online Help for more information.
USE TRAY 2/DUPLEXER alternates with To continue press ?	The printer did not detect the type of media you requested. The message shows the type of media and the way to change it.	Press ▼ (Select) button to accept the media type indicated in the printer's media path coming from the tray. To change the media type, press ▼ (Select) button and then the ▲ (Up) button or ▼ (Down) button to scroll through the media types.

Message	Description	Recommended action
22 ESD 010 DIFTER DUEML alternates with To continue press ?	Too much data was sent to the ESD card in the specified slot.	1 Press ▼ (Select) button to clear the error message. 2 Check the settings to make sure that the media type is set to "auto". 3 Check the media type settings in the printer driver to make sure that the printer is set to the correct media type. 4 Refer to the printer software online Help for more information.
22 NOVY SUPPLIES alternates with For help press ?	An error has occurred in order to print the page. More of the printer's supplies are needed. Values of "0" and "Y" are listed.	1 Turn on the printer power, and then turn off the printer power to clear the message. 2 Contact an HP-authorized service or support provider. (See "Contacting HP" on page 123.)

Message	Description	Recommended action
12.30.02 ZJIN IN CLOCUT02	There has been an error in the specified slot.	Remove jammed media from the specified slot. (See "Clearing jams" on page 97.)
12.30.02 ZJIN IN CLOCUT02	The printer received more data than can fit in its available memory. There are many macros, soft fonts, or complex graphics.	Press ▼ (Select) button to print the remaining data in the printer's memory. Then print the page again.
12.30.02 ZJIN IN CLOCUT02	The data buffer full, value, raster graphics problem.	Turn off the printer power, and then turn it back on.

Message	Description	Recommended action
21.00.02 COMPLEX JOIN IN	The printer was too complex to print the page.	1 Press ▼ (Select) button to clear the error message. 2 Turn off the printer power, and then turn it back on.

Message	Description	Recommended action
21.00.02 COMPLEX JOIN IN	The data buffer full, value, raster graphics problem.	1 Press ▼ (Select) button to clear the error message. 2 Turn off the printer power, and then turn it back on.



	ENWW	10/1/2008 10:47:06 AM	Troubleshooting common Macintosh problems 111	ENWW	10/1/2008 10:47:06 AM	Chapter 4 Problem solving 112	ENWW	10/1/2008 10:47:06 AM	Chapter 4 Problem solving 112	ENWW	10/1/2008 10:47:06 AM	Troubleshooting common Macintosh problems 113	ENWW	10/1/2008 10:47:06 AM	Chapter 4 Problem solving 114	ENWW	10/1/2008 10:47:06 AM	ENWW																																																																																																																																																																																																																																																		
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<h2>5 Service and support</h2>	This section contains information to help you order supplies and contact HP. It also provides warranty, recycling, and software license information.	<ul style="list-style-type: none">Ordering parts, accessories, and supplies on page 116Contacting HP on page 123How to contact your printer on page 125Service information form on page 126HP maintenance agreements on page 127Warranty information on page 128	<h3>Ordering parts, accessories, and supplies</h3>	This section provides information regarding ordering parts, supplies, and documentation. Use only parts and accessories specifically designed for this printer.	<p>The section "Part numbers" on page 118 is organized according to these types of accessories:</p>	<ul style="list-style-type: none">Paper handling on page 118Memory on page 118Cables on page 118Documentation on page 119Printing supplies on page 120	Ordering directly from HP	You can obtain the following directly from HP.	<ul style="list-style-type: none">Replacement parts To order replacement parts in the U.S. see http://www.hp.com/go/orderparts or http://www.hp.com/go/orderstatus. Outside the United States, contact your local authorized HP service center.Supplies and accessories To order supplies and accessories, see http://www.hp.com/go/supplies. To order accessories, see http://www.hp.com/go/accessories.Documentation See the websites listed under "Documentation" on page 119 for documentation that is available online.	Ordering through service or support providers	To order a part or accessory, contact an HP-authorized service or support provider. (See "Contacting HP" on page 123.)	Ordering directly through the embedded Web server (for printers with network connection)	Use the following steps to order printing supplies directly through the embedded Web server. (See "Using the embedded Web server" on page 82 for an explanation of this feature.)	To order directly through the embedded Web server	1 If the Web browser on the computer, type the IP-address for the printer. The printer status window appears.	2 Select the Setting tab at the top of the window.	3 If asked to provide a password, type the password.	4 On the left side of the status window, click the Order Supplies link. Double-click Order Supplies. This provides a link from which to purchase consumables. Supplies information with part numbers and printer information is provided.	5 Select the part numbers that you want to order and follow the instructions on the screen.	Ordering directly through the printer software (for printers directly connected to a computer)	The printer software gives you the ability to order supplies and accessories directly from the printer. You can use the printer software to view the status of your printer and to use the following:	<ul style="list-style-type: none">The Printer Status and Alerts software must be installed on your computer. Use the Custom installation option to install this software. (See "Using Printer Status and Alerts" on page 65.)The printer must be connected to your computer through a parallel cable.You must have access to the World Wide Web.	To order directly through the printer software	1 At the bottom right of the screen (in the system tray), click the Printer icon. This opens the status window.	2 On the left side of the status window, click the Printer icon for which you want to obtain supplies.	3 At the top of the status window, select Supplies . (You can also click View to Supplies Status .)	4 Click Order Supplies . The browser opens to the supplies purchasing page.	5 Select the supplies that you want to order.	Ordering parts, accessories, and supplies 117	ENWW	10/1/2008 10:47:06 AM	Ordering parts, accessories, and supplies 118	ENWW	10/1/2008 10:47:06 AM	Chapter 5 Service and support 119	ENWW	10/1/2008 10:47:06 AM	Chapter 5 Service and support 120	ENWW	10/1/2008 10:47:06 AM	Ordering parts, accessories, and supplies 121	ENWW	10/1/2008 10:47:06 AM	Chapter 5 Service and support 122	ENWW	10/1/2008 10:47:06 AM	Ordering parts, accessories, and supplies 123	ENWW	10/1/2008 10:47:06 AM	Chapter 5 Service and support 124	ENWW	10/1/2008 10:47:06 AM	Ordering parts, accessories, and supplies 125	ENWW	10/1/2008 10:47:06 AM	Chapter 5 Service and support 126	ENWW	10/1/2008 10:47:06 AM	Ordering parts, accessories, and supplies 127	ENWW	10/1/2008 10:47:06 AM	Chapter 5 Service and support 128	ENWW	10/1/2008 10:47:06 AM	Ordering parts, accessories, and supplies 129	ENWW	10/1/2008 10:47:06 AM	Chapter 5 Service and support 130	ENWW	10/1/2008 10:47:06 AM	Ordering parts, accessories, and supplies 131	ENWW	10/1/2008 10:47:06 AM	Chapter 5 Service and support 132	ENWW	10/1/2008 10:47:06 AM	Ordering parts, accessories, and supplies 133	ENWW	10/1/2008 10:47:06 AM	Chapter 5 Service and support 134	ENWW	10/1/2008 10:47:06 AM	Ordering parts, accessories, and supplies 135	ENWW	10/1/2008 10:47:06 AM	Chapter 5 Service and support 136	ENWW	10/1/2008 10:47:06 AM	Ordering parts, accessories, and supplies 137	ENWW	10/1/2008 10:47:06 AM	Chapter 5 Service and support 138	ENWW	10/1/2008 10:47:06 AM	Ordering parts, accessories, and supplies 139	ENWW	10/1/2008 10:47:06 AM	Chapter 5 Service and support 140	ENWW	10/1/2008 10:47:06 AM	Ordering parts, accessories, and supplies 141	ENWW	10/1/2008 10:47:06 AM	Chapter 5 Service and support 142	ENWW	10/1/2008 10:47:06 AM	Ordering parts, accessories, and supplies 143	ENWW	10/1/2008 10:47:06 AM	Chapter 5 Service and support 144	ENWW	10/1/2008 10:47:06 AM	Ordering parts, accessories, and supplies 145	ENWW	10/1/2008 10:47:06 AM	Chapter 5 Service and support 146	ENWW	10/1/2008 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and supplies 191	ENWW	10/1/2008 10:47:06 AM	Chapter 5 Service and support 192	ENWW	10/1/2008 10:47:06 AM	Ordering parts, accessories, and supplies 193	ENWW	10/1/2008 10:47:06 AM	Chapter 5 Service and support 194

HP has several types of maintenance agreements that meet a wide range of support needs. Maintenance agreements are not part of the standard warranty. Support services vary by area. Check with your local HP representative for specific service availability.

To provide you with the level of support best suited to your needs, HP has on-site service agreements with the following response times:

- Priority (4-hour) on-site service**
This agreement provides a 4-hour service response to your site for calls made during normal business hours.
- Next-day on-site service**
This agreement provides support to the next working day following a service request. Extended service hours and extended travel beyond HP's designated service zones are available on most on-site agreements (for additional charges).
- Weekly (volume) on-site service**
This agreement provides weekly on-site visits for organizations with many HP products. This agreement is designed for sites using 25 or more workstation products, including printers, plotters, computers, and disk drives.

For warranty statements, see "Hewlett-Packard limited warranty statement" on page 129 and "Warranty for print cartridges" (see "page 130"). You can also locate printer warranties on the Internet at <http://www.hp.com/go/support>.

For service during and after the warranty period, use the following resources:

- If printer hardware fails during the warranty period, go to <http://www.hp.com/go/support> or contact HP SupportPack.
- If printer hardware fails after the warranty period, and you have an HP service agreement or HP SupportPack, contact service as specified in the agreement.
- If you are not covered by an HP service agreement or HP SupportPack, contact an HP-authorized service or support provider.

If you are shipping equipment to be serviced, see "Guidelines for replacing the printer" on page 125.

HP Product(s) **DURATION OF WARRANTY**
Printer (models 2300, 2350, 2300e, 2300n)
1 year from purchase date; no repair for replacement
Accessories and 2300m
1 HP warrants to you, the end-user customer, that HP hardware and accessories will be free from defects in materials and workmanship during the duration of the warranty period, for the period indicated above. If a product fails to meet the warranty criteria, HP will repair it, or replace it, at its option, either repair or replace products which prove to be defective. Replacement products may be either new or like-new.

2 HP warrants to you that HP software will not fail to execute programming instructions after the date of purchase, for the period specified above, due to defects in material and workmanship. If a product fails to meet the warranty criteria, HP will repair it, or replace it, at its option, either repair or replace software which does not execute programming instructions due to such defects.

3 HP warrants to you that HP products will be free from latent defects in materials and workmanship during the warranty period. If a product fails to meet the warranty criteria, HP will repair it, or replace it, at its option, either repair or replace products which prove to be defective. Replacement products may be either new or like-new.

4 HP products may contain remanufactured parts equivalent to new in performance or may have been subject to reconditioning.

5 HP products may contain parts requiring periodic or immediate maintenance or calibration. (b) software, interfacing parts, or supplies not supplied by HP (c) unauthorized modification or misuse, (d) operation outside of the published environmental specifications for the product.

6 TO THE EXTENT ALLOWED BY LOCAL LAW, THE ABOVE WARRANTIES ARE EXCLUSIVE AND EXCEPT AS STATED HEREIN, HP MAKES NO OTHER WARRANTIES, WHETHER WRITTEN OR ORAL, EXPRESSED OR IMPLIED, AND HP SPECIFICALLY DISCLAIMS ANY IMPLIED WARRANTIES OF MERCHANTABILITY, SATISFACTORY QUALITY, AND FITNESS FOR A PARTICULAR PURPOSE. TO THE EXTENT ALLOWED BY LOCAL LAW, THE REMEDIES IN THIS WARRANTY STATEMENT ARE EXCLUSIVE AND IN LIEU OF ALL OTHER REMEDIES, WHETHER BASED IN CONTRACT, TORT, OR OTHERWISE. TO THE EXTENT ALLOWED BY LOCAL LAW, HP'S LIABILITY FOR INCIDENTAL OR CONSEQUENTIAL DAMAGES, SO THE ABOVE LIMITATION OR EXCLUSION MAY NOT APPLY TO YOU.

7 TO THE EXTENT ALLOWED BY LOCAL LAW, THE REMEDIES IN THIS WARRANTY STATEMENT ARE EXCLUSIVE AND IN LIEU OF ALL OTHER REMEDIES, EXCEPT AS INDICATED ABOVE. IN NO EVENT WILL HP OR ITS SUPPLIERS BE LIABLE FOR LOSS OF PROFITS, LOSS OF DATA, LOSS OF BUSINESS, LOSS OF REVENUE, LOSS OF SAVINGS, LOSS OF EQUIPMENT, LOSS OF SOFTWARE, OR DATA, OR OTHER DAMAGES, WHETHER BASED IN CONTRACT, TORT, OR OTHERWISE, EVEN IF HP OR ITS SUPPLIERS HAS BEEN ADVISED OF THE POSSIBILITY OF SUCH DAMAGES, OR IF THE REMEDY FAILS TO MEET ITS ESSENTIAL PURPOSE. TO THE EXTENT ALLOWED BY LOCAL LAW, THE REMEDIES IN THIS WARRANTY STATEMENT CONTAINED IN THIS STATEMENT EXCEPT TO THE EXTENT LAWFULLY PERMITTED DO NOT EXCLUDE, RESTRICT OR MODIFY AND ARE IN ADDITION TO THE MANDATORY STATUTORY RIGHTS APPLICABLE TO THE SALE OF THIS PRODUCT TO YOU.

HP SupportPack provides coverage for the HP hardware product and all HP-supported internal components. The hardware warranty covers a three-year period from date of the HP product purchase. The customer must purchase HP SupportPack within 90 days of the HP product purchase. See "Ordering parts" on page 131.

Note The following warranty applies to the print cartridge that came with this printer. This warranty supersedes the standard HP limited warranty for the print cartridge.

This printer is warranted to be free from defects in materials and workmanship during its useful life (the useful life is indicated by a printer control panel low-life message). This warranty does not cover products that have been modified, refurbished, remanufactured, misused, or tampered with in any way. This limited warranty gives you specific legal rights. You might have other rights that vary from country/region to country/region. Please refer to, or provide to, your local HP representative.

The following warranty applies to the print cartridge that came with this printer. This warranty supersedes the standard HP limited warranty for the print cartridge.

This printer is warranted to be free from defects in materials and workmanship during its useful life (the useful life is indicated by a printer control panel low-life message). This warranty does not cover products that have been modified, refurbished, remanufactured, misused, or tampered with in any way. This limited warranty gives you specific legal rights. You might have other rights that vary from country/region to country/region. Please refer to, or provide to, your local HP representative.

A Specifications

This section provides information about the following topics:

- "Printer specifications" on page 128
- "Media specifications" on page 134

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B Control panel menus

You can perform most routine printing tasks from the computer by using the program or printer driver. These two methods are the most convenient way to control the printer, and they will override the control panel settings. However, there are times when you may need to have more information about gaining access to the printer driver, see "Changing the settings for a print job" on page 47.

You can also control the printer by changing settings at the printer control panel. Use the control panel to gain access to printer features not supported by the program or printer driver.

You can also change the settings at the printer control panel so that the printer uses the currently selected values (see "Selecting the current settings" on page 145).

Some menus or menu items appear only if certain options are installed in the printer.

This section explains the following menus:

- "Retrieve Job menu" on page 144
- "Information menu" on page 144
- "Print menu" on page 144
- "Configure Device menu" on page 145
- "Diagnose menu" on page 145
- "Service menu" on page 145

Retrieve Job menu

This menu provides a list of the stored jobs in the printer and access to all the job storage features. You can print or delete these jobs at the printer control panel. See "Using job-storage features" on page 47.

Note If you try to print a stored job, it will only print if there is an optional hard disk installed. This section follows later in settings and possible values. In the Values column, the default value for each setting is the one with an asterisk (*) next to it.

Item	Values	Explanation
CLUSTERNAME	There is no value to select.	The name of the person who sent the job.
CLUSTERNAME2	There is no value to select.	The name of the job cluster to which one of your jobs or all of your private jobs belong that were assigned a specific name by the user who sent the job.
HD STORED JOBS	There is no value to select.	Indicates that there are no stored jobs to print or delete.
ALL PRIVATE JOBS	There is no value to select.	Applies only to private jobs stored in the printer. Selecting this item prints all private jobs stored in the printer.
Print	There is no value to select.	Selecting this item prints the job stored in the printer driver.
ERROR FOR TO PRINT	*1000 To 10000	A warning that appears for jobs that were assigned a personal identification number (PIN) in the printer driver. The PIN is used to identify the job.
COPYCOUNT	*1 To 2000	Allows you to set the number of copies that you want to print.
Date/Time	There is no value to select.	Delays the time for the job to print.
PRINT BY PIN	*1000 To 10000	A warning that appears for jobs that were assigned a PIN in the printer driver. You must enter the PIN to delete the job.

Information menu

The Information menu contains printer / information pages that give details about the printer and its configuration. Scroll to the information page that you want and press **[SELECT]**.

Item	Values	Explanation
PRINT INFO. INFO	There is no value to select.	The menu shows the layout and current settings of the printer control panel for printing. For more information, see "Using the printer control panel" on page 47.
CONFIDENTIAL	There is no value to select.	The configuration page shows the current printer configuration. If an HP Jetdirect print server is installed, an HP Jetdirect configuration page will also be printed. For more information, see "Using the printer control panel" on page 47.
PRINT STATUS	There is no value to select.	The supplies status page shows the levels of the supplies for the printer, calculation of the number of pages remaining, and cartridge usage information. For more information, see "Using the printer control panel" on page 47.
PRINT USAGE PAGE	There is no value to select.	The usage page shows the quantity of pages printed. Shows the total number of pages printed since the last time the usage page was printed.
INFO	There is no value to select.	Appears only if a mass storage device that contains a recognized file system is installed in the printer. An optional flash DIMM or optional hard disk drive accessory. This item generates usage containing information that can be used to analyze the printer's performance.
PRINT F.D.D.	There is no value to select.	Appears only if an interface device that contains a recognized file system is installed in the printer. Such an optional flash DIMM or optional hard disk drive accessory. For more information, see "Printer memory and expansion" on page 47.
PRINT P.C.F.	There is no value to select.	The P.C.F. (PC font) allows the PC fonts currently available to the printer. For more information, see "Using the printer control panel" on page 47.
PRINT P.C.F. LIST	There is no value to select.	The P.C.F. list lists all the PC fonts currently available to the printer. For more information, see "PC or font list" on page 76.

Paper Handling menu

If paper-handling settings are correctly configured at the printer control panel, you can print by selecting the type and size of paper in the program or printer driver. Some of the paper-handling settings are controlled by the printer control panel or printer driver. If the appropriate driver is installed, the printer control panel and printer-driver settings override control panel settings. For more information, see "Using the printer driver" on page 47.

Item	Values	Explanation
TRAY 1 SIZE	*A4 LTR A3 LEGAL A5 B5 R1200 R1210 R1215 R1220 R1225 R1230 R1235 R1240 R1245 R1250 R1255 R1260 R1270 R1275 R1280 R1290 R1295 R1300 R1310 R1320 R1330 R1340 R1350 R1360 R1370 R1380 R1390 R1400 R1410 R1420 R1430 R1440 R1450 R1460 R1470 R1480 R1490 R1500 R1510 R1520 R1530 R1540 R1550 R1560 R1570 R1580 R1590 R1600 R1610 R1620 R1630 R1640 R1650 R1660 R1670 R1680 R1690 R1700 R1710 R1720 R1730 R1740 R1750 R1760 R1770 R1780 R1790 R1800 R1810 R1820 R1830 R1840 R1850 R1860 R1870 R1880 R1890 R1900 R1910 R1920 R1930 R1940 R1950 R1960 R1970 R1980 R1990 R1995 R2000 R2010 R2020 R2030 R2040 R2050 R2060 R2070 R2080 R2090 R2095 R2100 R2110 R2120 R2130 R2140 R2150 R2160 R2170 R2180 R2190 R2195 R2200 R2210 R2220 R2230 R2240 R2250 R2260 R2270 R2280 R2290 R2295 R2300 R2310 R2320 R2330 R2340 R2350 R2360 R2370 R2380 R2390 R2395 R2400 R2410 R2420 R2430 R2440 R2450 R2460 R2470 R2480 R2490 R2495 R2500 R2510 R2520 R2530 R2540 R2550 R2560 R2570 R2580 R2590 R2595 R2600 R2610 R2620 R2630 R2640 R2650 R2660 R2670 R2680 R2690 R2695 R2700 R2710 R2720 R2730 R2740 R2750 R2760 R2770 R2780 R2790 R2795 R2800 R2810 R2820 R2830 R2840 R2850 R2860 R2870 R2880 R2890 R2895 R2900 R2910 R2920 R2930 R2940 R2950 R2960 R2970 R2980 R2990 R2995 R3000 R3010 R3020 R3030 R3040 R3050 R3060 R3070 R3080 R3090 R3095 R3100 R3110 R3120 R3130 R3140 R3150 R3160 R3170 R3180 R3190 R3195 R3200 R3210 R3220 R3230 R3240 R3250 R3260 R3270 R3280 R3290 R3295 R3300 R3310 R3320 R3330 R3340 R3350 R3360 R3370 R3380 R3390 R3395 R3400 R3410 R3420 R3430 R3440 R3450 R3460 R3470 R3480 R3490 R3495 R3500 R3510 R3520 R3530 R3540 R3550 R3560 R3570 R3580 R3590 R3595 R3600 R3610 R3620 R3630 R3640 R3650 R3660 R3670 R3680 R3690 R3695 R3700 R3710 R3720 R3730 R3740 R3750 R3760 R3770 R3780 R3790 R3795 R3800 R3810 R3820 R3830 R3840 R3850 R3860 R3870 R3880 R3890 R3895 R3900 R3910 R3920 R3930 R3940 R3950 R3960 R3970 R3980 R3990 R3995 R4000 R4010 R4020 R4030 R4040 R4050 R4060 R4070 R4080 R4090 R4095 R4100 R4110 R4120 R4130 R4140 R4150 R4160 R4170 R4180 R4190 R4195 R4200 R4210 R4220 R4230 R4240 R4250 R4260 R4270 R4280 R4290 R4295 R4300 R4310 R4320 R4330 R4340 R4350 R4360 R4370 R4380 R4390 R4395 R4400 R4410 R4420 R4430 R4440 R4450 R4460 R4470 R4480 R4490 R4495 R4500 R4510 R4520 R4530 R4540 R4550 R4560 R4570 R4580 R4590 R4595 R4600 R4610 R4620 R4630 R4640 R4650 R4660 R4670 R4680 R4690 R4695 R4700 R4710 R4720 R4730 R4740 R4750 R4760 R4770 R4780 R4790 R4795 R4800 R4810 R4820 R4830 R4840 R4850 R4860 R4870 R4880 R4890 R4895 R4900 R4910 R4920 R4930 R4940 R4950 R4960 R4970 R4980 R4990 R4995 R5000 R5010 R5020 R5030 R5040 R5050 R5060 R5070 R5080 R5090 R5095 R5100 R5110 R5120 R5130 R5140 R5150 R5160 R5170 R5180 R5190 R5195 R5200 R5210 R5220 R5230 R5240 R5250 R5260 R5270 R5280 R5290 R5295 R5300 R5310 R5320 R5330 R5340 R5350 R5360 R5370 R5380 R5390 R5395 R5400 R5410 R5420 R5430 R5440 R5450 R5460 R5470 R5480 R5490 R5495 R5500 R5510 R5520 R5530 R5540 R5550 R5560 R5570 R5580 R5590 R5595 R5600 R5610 R5620 R5630 R5640 R5650 R5660 R5670 R5680 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R7195 R7200 R7210 R7220 R7230 R7240 R7250 R7260 R7270 R7280 R7290 R7295 R7300 R7310 R7320 R7330 R7340 R7350 R7360 R7370 R7380 R7390 R7395 R7400 R7410 R7420 R7430 R7440 R7450 R7460 R7470 R7480 R7490 R7495 R7500 R7510 R7520 R7530 R7540 R7550 R7560 R7570 R7580 R7590 R7595 R7600 R7610 R7620 R7630 R7640 R7650 R7660 R7670 R7680 R7690 R7695 R7700 R7710 R7720 R7730 R7740 R7750 R7760 R7770 R7780 R7790 R7795 R7800 R7810 R7820 R7830 R7840 R7850 R7860 R7870 R7880 R7890 R7895 R7900 R7910 R7920 R7930 R7940 R7950 R7960 R7970 R7980 R7990 R7995 R8000 R8010 R8020 R8030 R8040 R8050 R8060 R8070 R8080 R8090 R8095 R8100 R8110 R8120 R8130 R8140 R8150 R8160 R8170 R8180 R8190 R8195 R8200 R8210 R8220 R8230 R8240 R8250 R8260 R8270 R8280 R8290 R8295 R8300 R8310 R8320 R8330 R8340 R8350 R8360 R8370 R8380 R8390 R8395 R8400 R8410 R8420 R8430 R8440 R8450 R8460 R8470 R8480 R8490 R8495 R8500 R8510 R8520 R8530 R8540 R8550 R8560 R8570 R8580 R8590 R8595 R8600 R8610 R8620 R8630 R8640 R8650 R8660 R8670 R8680 R8690 R8695 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R14080 R14090 R14095 R14100 R14110 R14120 R14130 R14140 R14150 R14160 R14170 R14180 R14190 R14195 R14200 R14210 R14220 R14230 R14240 R14250 R14260 R14270 R14280 R14290 R14295 R14300 R14310 R14320 R14330 R14340 R14350 R14360 R14370 R14380 R14390 R14395 R14400 R14410 R14420 R14430 R14440 R14450 R14460 R14470 R14480 R14490 R14495 R14500 R14510 R14520 R14530 R14540 R14550 R14560 R14570 R14580 R14590 R14595 R14600 R14610 R14620 R14630 R14640 R14650 R14660 R14670 R14680 R14690 R14695 R14700 R14710 R14720 R14730 R14740 R14750 R14760 R14770 R14780 R14790 R14795 R14800 R14810 R14820 R14830 R14840 R14850 R14860 R14870 R14880 R14890 R14895 R14900 R14910 R14920 R14930 R14940 R14950 R14960 R14970 R14980 R14990 R14995 R15000 R15010 R15020 R15030 R15040 R15050 R15060 R15070 R15080 R15090 R15095 R15100 R15110 R15120 R15130 R15140 R15150 R15160 R15170 R15180 R15190 R15195 R15200 R15210 R15220 R15230 R15240 R15250 R15260 R15270 R15280 R15290 R15295 R15300 R15310 R15320 R15330 R15340 R15350 R15360 R15370 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Name	Values	Explanation
SECURITY: HTTP REQUIREMENT	HTTP(S) OPTIONAL (default)	For configuration management, specify whether the embedded Web server will accept communications using HTTP or HTTPS. If you select HTTP, then both HTTP and HTTPS are supported. For security, encrypt all communications, only HTTPS access is accepted. The printer automatically configures itself to use HTTPS.
SECURITY: SECURITY LEVEL	SECURE (default) LESS SECURE	Specify whether the current security settings on the print server will be saved or reset to factory defaults. If you select SECURITY LEVEL, then the printer automatically configures itself to match the security settings of the network and communication mode (full-duplex or full-duplex).
LINK SPEED	WIRELESS SPEED FULL SPEED HALF SPEED QUARTER SPEED FULL-DUPLEX	For an Ethernet network only, select the network link speed and duplex for the communication mode of the printer. Select SPEED FULL if the printer automatically configures itself to match the network speed. Select SPEED HALF if the printer automatically configures itself to match the network speed (half-duplex full-duplex).

Resets submenu		
Items in the Resets submenu relate to returning settings to the defaults and changing settings such as PowerSave.		
The following table lists the settings and possible values. In the Values column, the default value for each setting is the one with an asterisk (*) next to it.		
Item	Values	Explanation
RESTORE FACTORY SETTINGS	This is no value. No selection	Performs a simple reset and restores most of the factory settings. This selection also clears the print buffer for the active I/O. Restoring factory settings does not affect printer-specific settings on the optional HP Jetdirect print server.
RESET	OFF ON	Restoring memory during a print pollutes the print job.
Turns PowerSave mode on in the following mode does not affect the printer's power consumption: ▪ minimizes the amount of power consumed by the printer when it is idle. ▪ reduces the number of components in the printer (turns off the display backlight, but display is still running). ▪ The printer automatically comes out of PowerSave mode when it receives a page from the printer, when you open a control panel button, or when you open the cover. You can now long the printer remains idle before it enters PowerSave mode. (See PowerSave on page 176.)		

Diagnostics menu		
Administrators can use this submenu to isolate parts and to troubleshoot jam and print-quality issues.		
The following table lists the settings and possible values. In the Values column, the default value for each setting is the one with an asterisk (*) next to it.		
Item	Values	Explanation
PRIOR. EVENT LOG	This is no value. No selection	Prints the event log. The event log contains up to 50 most recent entries in the event log. The printed event log shows an number, page count, error code, and date/time for each entry.
SIMUL. DRAFT TEST	This is no value. No selection	Presses the [Start] button to switch through the contents of the printer's memory. This selection prints the 50 most recent pages. Use the [Up] or [Down] button to scroll through the Simul. Draft contents.
PAPER PATH TEST	This is no value. No selection	Presses the [Start] button to start the paper path test. This selection prints a series of test pages showing the paper-handling features of the printer.
PRIOR. TEST PAGE	This is no value. No selection	Presses the [Start] button to start the paper path test. This selection prints a series of test pages showing the paper-handling features of the printer. See the other items before choosing PRIOR. TEST PAGE .
SOURCE	ALL TRAYS TRAY 1 TRAY 2 TRAY 3 TRAY 4 TRAY 5 TRAY 6	Selects the tray whose paper path you want to test. You can choose the ALL TRAYS option to print a page from all six paper paths. Paper must be loaded in the selected tray.
DISPLAY	ON OFF	Determine whether or not the paper goes through the duplexer during the paper path test. The menu item ON means that the paper passes through the duplexer (HP LaserJet 2300 printer, HP LaserJet 2300n printer, and HP LaserJet 2300tn printer); OFF means that the paper does not pass through the duplexer.
COPY COUNT	1 20 50 100 200	Set how many sheets of paper are used from each tray during the paper path test. If you are testing the optional duplex feature, then copy counts 100 or higher.

Service menu

The Service menu is locked and requires a PIN for access. This menu is intended for use by authorized service personnel.

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Configure Device menu 159

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Diagnostics menu 161

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C Printer memory and expansion

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- [Checking memory installation](#) on page 167
- [Installing an HP Jetdirect EIO card](#) on page 168

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Printer memory

The printer comes with one dual inline memory module (DIMM) already installed in the right-most slot position on the formatter board labeled "Boot DIMM Only". There are two additional DIMM slots for upgrading memory.

- **NOTE:** Single inline memory modules (SIMMs) used in previous HP LaserJet printers are not compatible with the printer.
- **NOTE:** DIMMs are available in 8, 16, 32, 64, and 128 MB, to a maximum of 288 MB for the HP LaserJet 2300 and HP LaserJet 2300n printers, and a maximum of 304 MB for the HP LaserJet 2300, HP LaserJet 2300n, HP LaserJet 2300dn, and HP LaserJet 2300tn printers.
- **NOTE:** DIMM-based accessory fonts, macros, and patterns
- **NOTE:** Other DIMM-based printer languages and printer options

For ordering information, see [Ordering parts, accessories, and supplies](#) on page 116.

Note

Single inline memory modules (SIMMs) used in previous HP LaserJet printers are not compatible with the printer.

You cannot add more memory to the printer if you use the optional printer interface card, print PostScript (PS) documents, or use many downloaded fonts. Additional memory also gives you more flexibility in supporting popular job-storage features, such as quick copying.

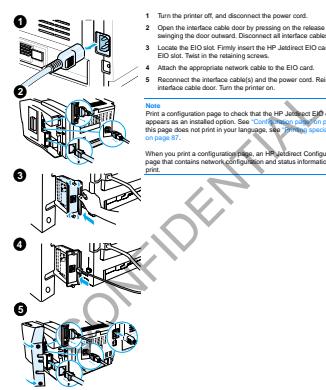
The printer has one slot for installing memory and one slot for a mass storage device, such as an optional hard disk for storing fonts and toners, and for certain job-storage functions. The EIO slot is used for adding a network card or a connectivity card for serial, USB, or AppleTalk.

To find out how much memory is installed in the printer, or to find out what is installed in the EIO slots, print a configuration page. (See [Configuration page](#) on page 27.)

When you print a configuration page, the HP Jetdirect EIO card appears as an installed option. See [Configuring printer](#) on page 72. If you do not see the EIO card listed in your language, see [Special pages](#) on page 87.

When you print a configuration page, an HP Jetdirect Configuration page that contains network configuration and status information will also print.

Installing an HP Jetdirect EIO card



Print a configuration page to check that the HP Jetdirect EIO card is installed as an installed option. See [Configuring printer](#) on page 72. If you do not see the EIO card listed in your language, see [Special pages](#) on page 87.

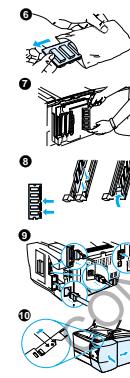
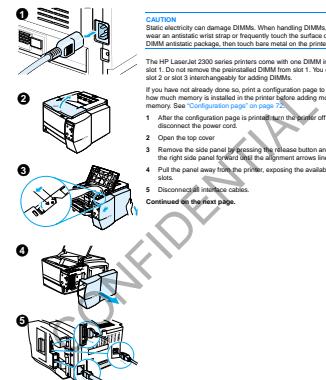
When you print a configuration page, an HP Jetdirect Configuration page that contains network configuration and status information will also print.

Checking memory installation

- Verify that DIMMs are installed correctly:
 - 1 Turn the printer on. Check that the printer control panel displays the **READY** light after the power cord is connected. If the **READY** light does not come on, or if the **READY** light is on but the printer has not been correctly installed. See [Troubleshooting network printing problems](#) on page 171.
 - 2 Print a configuration page (see [Configuration page](#) on page 72).
- 3 Check the Installed Options section on the self-test/configuration page and compare it with the self-test/configuration page printed before the DIMM installation. If the number of recognized memory has not increased:
 - The DIMM might not be installed correctly (repeat the installation procedure).
 - Try another DIMM slot.
 - The DIMM might be defective (try a new DIMM).

Most software programs do not require you to enter printer commands. See your computer and software documentation to find the method for entering printer commands, if needed.

Installing memory



Checking memory installation

D Printer commands

PCL 5e printer commands tell the printer which tasks to perform or which fonts to use. This section provides a quick reference for users who are already familiar with printer command syntax.

HP-GL/2 The printer has the ability to print vector graphics using HP-GL/2 graphics language. Printing in the HP-GL/2 language is required when the printer leaves PCL 5e language and enters HP-GL/2 mode, which can be done by sending the printer a printer command sequence that includes the printer command **HP-GL/2**.

PJL PCL 5e printer command above PCL 5 and other printer languages. The four basic functions provided by PJL are printer language switch, job separator, printer configuration, and status readback from the printer. PJL commands can be used to change printer default settings from the printer. PJL commands can also be used to change printer default settings.

Note See [Common PCL 5e printer commands](#) on page 172 for a list of commonly used PCL 5e commands. For a complete list of printer commands, see [Printer command syntax](#) on page 165.

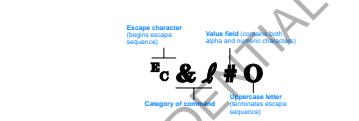
Understanding PCL printer command syntax

Before using printer commands, compare these characters:

Lowercase I: **i** Uppercase O: **O**
Lowercase N: **n** Uppercase O: **O**
Number One: **1** Number Zero: **0**

Many printer commands use the lowercase letter **i** for the number one (1), or the uppercase letter **I** for the number one (1). These letters are interchangeable. You must use the correct character and case specified for PCL printer commands.

The following illustration displays the elements of a typical printer command (in this instance, a command for page orientation).



Combining escape sequences

Escape sequences can be combined into one escape sequence string. There are three important rules to follow when combining codes:

- 1 For each escape sequence, the first two characters after the **⌘** character must be the same.
- 2 When combining escape sequences, change the uppercase (hexadecimal) character in each sequence to lowercase.
- 3 The last character of the combined escape sequence must be uppercase.

The following escape sequence combination would be sent to the printer to select legal paper, landscape orientation, and 16 lines per inch:

⌘ЗЖДД

The following escape sequence sends the same printer commands by combining them into a shorter sequence:

⌘ЗЖД

Checking memory installation

Most software programs, such as Microsoft Word, do not require you to enter printer commands. See your computer and software documentation to find the method for entering printer commands, if needed.

The following variables must be filled in, or the printer will use defaults. For example, if you want a symbol set that contains line-draw characters, select the 103 (PC-8) or 120 (PC-850) symbol set. Other common symbol set codes are listed on the next page.

Selecting PCL 5e fonts

- The printer font list provides PCL 5e printer commands for selecting fonts. (See [PCL or PCL font list](#) on page 76 for information about how to print the list.) A sample section is shown below.

The following variables must be filled in, or the printer will use defaults. For example, if you want a symbol set that contains line-draw characters, select the 103 (PC-8) or 120 (PC-850) symbol set. Other common symbol set codes are listed on the next page.

Common PCL 5e printer commands

Function Command Options (#)

Job control commands

Reset **<E** n/a

Number of Copies **<#<X** 1 to 999

Page control commands

Paper Source **<#<H** 0 = prints or ejects current page

1 = manual feed

2 = manual feed, envelope

3 = tray 1

4 = tray 2

5 = auto select

Paper Size **<#<A** 1 = Executive

2 = Letter

3 = Legal

4 = A4

5 = A3

6 = A5

7 = A6

8 = A7

9 = A8

10 = A9

11 = Commercial 10

12 = Commercial 12

13 = Legal

14 = Statement

15 = Ledger

16 = Wide Ledger

17 = Wide Legal

18 = Custom

Orientation **<#<O** 1 = portrait

2 = landscape

Top Margin **<#<ME** # = number of lines

Top Length (bottom margin) **<#<MF** # = number of lines from top margin

Left Margin **<#<LM** # = column number

Right Margin **<#<RM** # = column number from left margin

Horizontal Motion Index **<#<HI** # = inch increments (compresses print horizontally)

Vertical Motion Index **<#<VI** # = inch increments (compresses print vertically)

Line Spacing **<#<LS** # = lines per inch (1, 2, 3, 4, 5, 6, 12, 16, 24, 48)

Perforation Skip **<#<PL** # = distance

Cursor positioning

Vertical Position (Rows) **<#<RF** # = row number

Vertical Position (Dots) **<#<YR** # = dot number (300 dots = 1 inch)

Vertical Position (Decimels) **<#<AR** # = decimel number (720 decimels = 1 inch)

Font selection

Symbol Sets **<#<SF** # = symbol set

Font Selection **<#<FS** # = font selection

