hp business inkjet
2300 · 2300n · 2300dtn

user's guide

hp business inkjet 2300
hp business inkjet 2300n
hp business inkjet 2300dtn

user's guide

Safety Information

Always follow basic safety precautions when using this product to reduce risk of injury from fire or electric shock.

1   Read and understand all instructions in the documentation that comes with the printer.

2   Use only a grounded electrical outlet when connecting this product to a power source. If you do not know whether the outlet is grounded, check with a qualified electrician.

3   Observe all warnings and instructions marked on the product.

4   Unplug this product from wall outlets before cleaning.

5   Do not install or use this product near water, or when you are wet.

6   Install the product securely on a stable surface.

7   Install the product in a protected location where no one can step on or trip over the line cord, and the line cord cannot be damaged.

8   If the product does not operate normally, see "Maintaining and troubleshooting."

9   There are no user-serviceable parts inside. Refer servicing to qualified service personnel.

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1 Getting started

Thank you for purchasing this printer. This guide provides information about how to set up your printer, use the printer features, and resolve printer problems.

Additional resources

The following resources provide additional information about the printer:

- **Setup poster**

  The setup poster provides illustrated setup information. A printed version of this document is provided with the printer. Also, an electronic version is available as an Adobe® Acrobat® Portable Document Format (PDF) file on the Starter CD.

- **Getting started guide**

  The getting started guide provides instructions for setting up the printer, as well as warranty and safety information. This guide is provided with the printer in a printed format.

- **Toolbox (Windows only)**

  The Toolbox provides status and maintenance information about the printer, as well as step-by-step guidance for printing tasks. For more information, see "Using the Toolbox."

- **Printer driver online help (Windows only)**

  The online help provides information about using the printer driver.

- **HP Jetdirect Administrator's Guide**

  This guide provides information for configuring and troubleshooting the HP Jetdirect print server(s) used with this printer. It is available as a PDF file (all languages) and CHM file (English only) on the Starter CD.

- **Embedded Web server**

  The embedded Web server provides configuration, status, and diagnostic information about the printer. It also includes links to HP Instant Support and myPrintMileage, which are Web-based tools that help you diagnose and solve printer problems, and manage your printing activities and printer supplies more effectively. The embedded Web server can be used from a standard Web browser or from the Toolbox (Windows only).

  For more information, see "Using the embedded Web server."

- **HP Instant Support**

  HP Instant Support is a Web-based tool that provides you with product-specific services, troubleshooting tips, and information about your printer's ink and media usage. With this information, you can diagnose and solve printer problems, and manage your printing activities and printer supplies more effectively. For more information, see "Using HP Instant Support."

- **World Wide Web**

  The following HP websites have the latest printer software, product information, and support information available for the printer.

  - http://www.hp.com/support/businessinkjet2300
  - http://www.hp.com

Printer configurations

This printer is available in the configurations described in this section.

HP Business Inkjet 2300

The HP Business Inkjet 2300 printer is a four-color Inkjet printer that prints up to 26 pages per minute (ppm) in monochrome (black and white) and 20 ppm in color in Fast mode. The laser-quality speed is 9 ppm for monochrome and 5 ppm for color. (The "laser-quality speed" comparison has the page-per-minute speeds of the HP Business Inkjet 2300 series printers against the benchmark of the HP Color LaserJet 4600 at comparable print quality. This comparison is based solely on HP's internal testing.) This printer can produce 4800 by 1200 optimized dpi (up to 4800 x 1200-optimized dpi color printing on premium photo papers, 1200 x 1200-input dpi).

- **Trays.** The printer comes with a tray that holds up to 150 sheets of paper, or up to 30 transparencies (Tray 1). The printer also comes with Tray 2, which holds up to 250 sheets of plain paper. For more information, see "Supported media sizes" and "Supported media types and weights".

- **Connectivity.** The printer provides a standard bidirectional parallel port (IEEE-1284 compliant) and a universal serial bus (USB) port. The printer also contains an enhanced input/output (EIO) slot.

- **Memory.** The printer contains 64 MB of memory. To allow for memory expansion, the printer has two dual inline memory module (DIMM) slots that accept 64 or 128 MB RAM. This printer can support up to 320 MB of memory (including the 64 MB in the printer).

HP Business Inkjet 2300n

The HP Business Inkjet 2300n printer includes the features of the HP Business Inkjet 2300 printer, plus an HP Jetdirect print server. An HP Jetdirect print server allows the printer to be shared in a network environment by connecting the printer directly to the network.

HP Business Inkjet 2300dtn

The HP Business Inkjet 2300dtn printer includes the features of the HP Business Inkjet 2300n printer, plus an auto-duplex unit for automatic 2-sided printing. Also, it has a larger Tray 2, which holds up to 500 sheets of plain paper.

Understanding printer parts

Front view
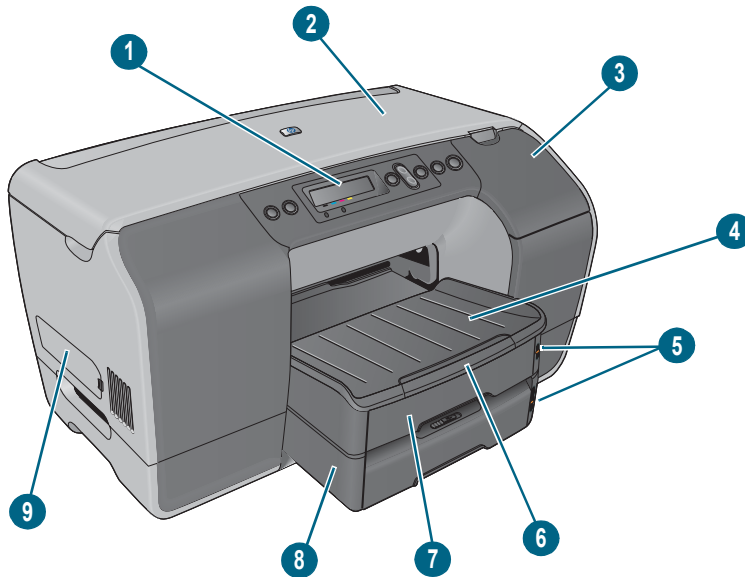
1   Control panel

2   Top cover

3   Ink cartridge cover

4   Output tray

5   Media level indicators

6   Tray extension

7   Tray 1

8   Tray 2

9   Side cover (provides access to memory modules)

Printing supplies area
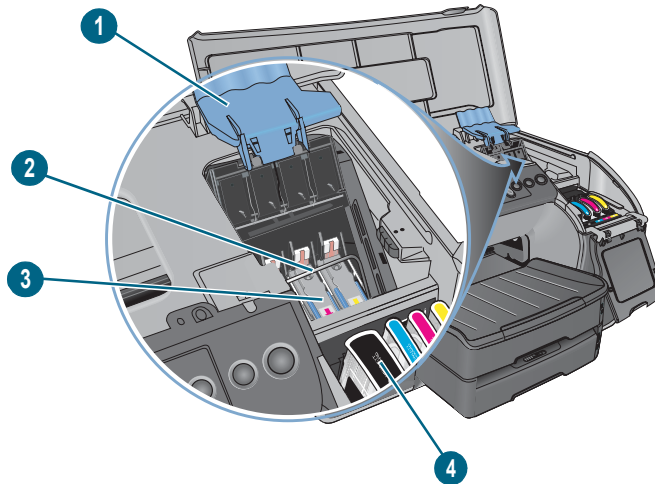
1 Printhead latch (provides access for installing or removing printheads from their color-coded sockets)

2 Metal catch bar (catches on the hooks of the printhead latch and engages the latch)

3 Printheads

4 Ink cartridges

Back view
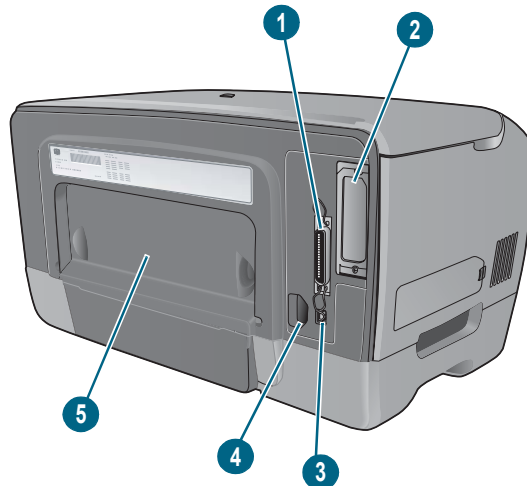
1 Parallel port

2 EIO slot (allows an HP Jetdirect print server to be installed. The HP Business Inkjet 2300n and 2300dtn configurations come with the print server installed.)

3 USB port

4 Power input

5 Rear access panel (to be removed when installing the optional auto-duplex unit. The auto-duplex unit is included with the HP Business Inkjet 2300dtn.)

Control panel
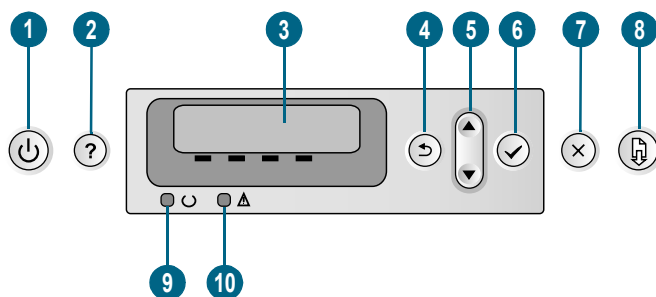
1   Power button (⏻): Turns the printer off and on.

2   Help button (?): Provides additional information about printer messages or menus.

3   LCD display: Shows status and error messages, as well as ink cartridge levels.

4   Back button (⏎): Navigates backward one level in the menus.

5   Up (▲) and Down (▼) arrow button: Navigates through menu items and increases or decreases numerical values.

6   Select button (✓): Enters the menus and selects highlighted menu items.

7   Cancel Job button (✕): Cancels the current print job. Press this button only once to cancel the print job. The time it takes to cancel depends on the size of the print job. This button also exits all menus.

8   Resume button (⏏): Restarts printing after continuable errors. This button also exits all menus.

9   Ready light: Indicates one of three possible states:

    On — The printer is online and ready to accept print jobs.

    Off — The printer is turned off.

    Flashing — The printer is initializing, canceling a print job, or turning off.

10 Attention light: Indicates one of three possible states:

    Off — No conditions exist that require attention. A printer-status message usually accompanies this indicator.

    Flashing — The printer has encountered an error that requires user attention (such as an open door or a paper jam). An error message usually accompanies this indicator.

    Flashing alternately with Ready light — A critical error has occurred, and the printer requires attention. A critical-error message usually accompanies this indicator.

For a list of messages that can appear in the control panel display, see "Control panel messages." For a menu map of the settings that can be accessed through the control panel, see "Printing a control panel menu map."

Connecting the printer

Your printer supports local printing or network printing.

Local printing

For local printing, you can connect the printer using a USB cable or a parallel cable. Follow these procedures to connect the printer and install the printer software:

- Connecting directly using a USB or parallel cable (Windows)

- Connecting directly using a USB cable (Mac OS)

  For more information about the printer software provided with the printer, see "Printer software components."

You can share the printer in these ways:

- You can use a simple form of networking, known as locally shared networking, if you used a parallel cable or USB cable to connect the printer to a computer running Windows. Using this method, you can share the printer with other Windows users. See "Sharing the printer on a locally shared network (Windows)."

- You can also use locally shared networking if you used a USB cable to connect the printer to a computer running a Mac OS. Using this method, you can share the printer with other Mac OS users. See "Sharing a printer on a peer-to-peer network (Mac OS)."

Network printing

If the printer has an HP Jetdirect print server installed, the printer can be shared in a network environment by connecting it directly to the network. This allows both users of Windows and Mac OS to print. See "Connecting to a network."

Printer software components

Printer software for Windows and Mac OS is provided on the Starter CD that comes with your printer.

Windows printer software components

The printer software for Windows includes the following components:

- **Printer drivers**

  Printer drivers access the printer features and allow the computer to communicate with the printer. The following printer drivers are included with the printer:

Operating system*	PCL 5c, PCL 6, and Postscript (PS) level 3 emulation
Windows 98, Windows Me	✓
Windows NT 4.0	✓
Windows 2000	✓
Windows XP 32-bit	✓
Windows XP 64-bit	(Available only at http://www.hp.com/support/businessinkjet2300)

*Printer features vary among printer drivers and operating systems. See the online help in your printer driver for details. If you are using the emulated PostScript printer driver on Windows 98, Windows Me, or Windows NT 4.0, see "Printing using PostScript emulation."

- **Toolbox**

  The Toolbox provides printer status and maintenance information about the printer. For more information, see "Using the Toolbox."

- **Screen fonts**

  Screen fonts (also called "printer matching fonts") are fonts used by the computer that correspond to the fonts in the printer. Adobe PostScript® 3™ screen fonts are also included.

- **Customization Utility**

  This utility lets you select installation options and create a custom installer that can be launched silently from a batch file. It can be found on the Starter CD menu.

Mac OS printer software components

The printer software for Mac OS includes the following components:

Operating system	PPDs	PDEs	HP LaserJet Utility
Mac OS 9 (9.1 and later), Mac OS X Classic (10.1 and later)	✓		✓
Mac OS X (10.1 and later)	✓	✓	

- **PostScript Printer Description files (PPDs)**

  PPDs, in combination with the Apple LaserWriter 8 printer driver, access the printer features and allow the computer to communicate with the printer. An installation program for the PPDs and other software is provided on the Starter CD. Use the Apple LaserWriter 8 printer driver that comes with the computer.

- **Printing Dialog Extensions (PDEs)**

  PDEs are code plug-ins that provide access to printer features, such as number of copies, print on both sides, and quality settings. An installation program for the PDEs and other software is provided on the Starter CD.

- **HP LaserJet Utility**

  The HP LaserJet Utility allows control of features that are not available in the printer driver. Use the illustrated screens to select printer features and complete tasks with the printer, such as the following:

  - download files, view fonts, and change many of the printer settings
  - check the ink cartridge levels
  - configure and set the printer for Internet Protocol (IP) or AppleTalk printing

Note   The HP LaserJet Utility is not supported for the Korean, Japanese, Simplified Chinese, and Traditional Chinese languages.

Other resources

- Printer installation software for UNIX® (HP-UX, Sun Solaris) networks is available for download at http://www.hp.com.

- For information about using Linux with HP printers, see http://www.linuxprinting.org.

- For information about using the IBM PostScript 3 emulation printer driver for IBM OS/2, see http://www7.software.ibm.com/2bcprod.nsf.

Connecting directly using a USB or parallel cable (Windows)

You can use a USB cable to connect the printer to the computer if the computer has a USB port and is running Windows 98, Windows Millennium Edition (Me), Windows 2000, or Windows XP.

If your computer does not meet these specifications, connect the printer to your computer using a parallel cable.

Note   Do not connect a USB cable and a parallel cable to the printer at the same time during installation.

It is recommended that you install the software *before* you connect the printer to the computer. Connect the USB or parallel cable only when you are prompted by the printer software.

If your computer is not running Windows 2000 (Service Pack 3 and above) or Windows XP, you may need to restart your computer to complete the software installation when prompted.

In most cases, after you install the printer software and connect a printer to the computer, you can install additional printers with USB cables without reinstalling the printer software.

If you are connecting the printer to a computer running Windows XP 64-bit, download the printer driver from http://www.hp.com/support/businessinkjet2300 and install it using **Add Printer** from the **Printers** or **Printers and Faxes** folder.

Software-first installation (recommended)

Follow this setup procedure if you have not yet connected a USB or parallel cable. This is the preferred method.

Note   If you are using Windows NT 4.0, Windows 2000, or Windows XP, you must have administrator privileges to install a printer driver.

1   Close any running applications.

2   Insert the Starter CD into the CD-ROM drive. The CD menu runs automatically.

   If the CD menu does not run automatically, click **Start**, and then click **Run**. At the command line box, type the letter of your computer's CD-ROM drive followed by `:\SETUP` (for example, type `D:\SETUP`).

3   On the CD menu, click **Install Printer Driver**.

4   Choose the language you want and click **OK**.

5   Follow the instructions on the screen.

6   When prompted for the connection type, click **Connected directly to this computer**, and then click **Next**.

7   Do one of the following:

   • *For USB connection:* Select **USB Cable**, and then click **Next**.

   • *For parallel connection:* Select **Parallel Cable** and select the parallel port to which the printer is connected (usually LPT1). Then click **Next**.

Note   It is recommended that you install the Toolbox, which is installed by selecting **Typical Installation (Recommended)**. If you select **Custom Installation**, you can still choose to install the Toolbox from the list of options to install. The Toolbox provides status and maintenance information about your printer. It also provides access to documentation and online help tools for solving printer problems. If you do not install the Toolbox, you will not see printer error messages on your computer screen and will not have access to the myPrintMileage website. See "Using the Toolbox" for more information.

8   Follow the instructions on the screen to continue the installation.

You can share the printer during installation. To share the printer after it has been installed, see "Sharing a printer connected to your computer."

9 When prompted, connect the USB cable or parallel cable to the computer and the printer.

The **Found New Hardware** wizard appears on the screen and the printer icon is created in the Printers folder.

Hardware-first installation

If you connected the USB cable or parallel cable before you started the software, the **Found New Hardware** wizard appears on the computer screen. Follow these instructions to complete the installation.

Note   Do not turn off the printer or unplug the cable from the printer when the printer setup program is running. If you do so, the setup program will not finish.

1 On the screen that allows you to select a method to locate the driver, select the advanced option and click **Next**.

Note   Do not allow the hardware wizard to perform an automatic search for the driver.

2 Select the check box that allows you to specify the driver location, ensure that the other check boxes are cleared.

3 Insert the Starter CD into the CD-ROM drive.

If the CD menu appears, click **Exit** twice to close the CD menu.

4 Browse to locate the root directory on the Starter CD (for example, D:), and then click **OK**.

5 Click **Next**, and then follow the instructions on the screen.

You can share the printer during installation. To share the printer after it has been installed, see "Sharing a printer connected to your computer."

6 Click **Finish**.

- Upon completion of the installation process, the hardware wizard automatically launches the printer setup program. This may take more than a minute. For Windows 98 and Windows Me, you must complete the setup program at this point if you wish to install a non-English driver.

- The setup program provides options to install non-driver components such as the Toolbox. It is recommended that you install the Toolbox.

Sharing the printer on a locally shared network (Windows)

In a locally shared network, the printer is connected directly to the USB or parallel connector of a selected computer (known as the server) and is shared by other computers (clients). Use this configuration only in small groups or when usage is low. The computer connected to the printer is slowed down when many users print to its shared printer.

You can share the printer on a locally shared network when:

● The computer connected to the printer is running Windows.

● The printer will be shared with other Windows users. (You cannot share the printer with Mac OS users.)

To connect the printer to a Macintosh and share it with other Mac OS users, see "Connecting directly using a USB cable (Mac OS)."

Sharing a printer connected to your computer

When sharing a locally connected printer, use the computer with the newest operating system as the server. It is recommended that you use Windows 2000 or Windows XP as the server.

1   From the Windows desktop, do one of the following:

   - *Windows 98, Windows Me, Windows NT 4.0, and Windows 2000:*
     Click **Start**, point to **Settings**, and then click **Printers**.

   - *Windows XP:*
     Click **Start**, and then click **Printers and Faxes**.
     Or, click **Start**, click **Control Panel**, and then click **Printers and Faxes**.

2   Right-click the printer and click **Properties**, then select the **Sharing** tab.

3   Select the option to share the printer, and give the printer a share name.

4   If you are sharing the printer with users of other versions of Windows, you can click **Additional Drivers** to install their drivers as a convenience to them. This optional step requires you to have the Starter CD in your CD drive.

If Windows NT 4.0 is the server, administrators need to install the Windows 2000 and Windows XP user mode driver on the server. This is because Windows 2000 and Windows XP cannot print using the Windows NT 4.0 kernel mode driver.

To install the Windows 2000 and Windows XP user mode driver on the Windows NT 4.0 server:

1   In the driver properties dialog box on the server, click the **General** tab and then click the **New Driver** button.

2   When prompted for files, locate the Windows 2000 and Windows XP folder on the Starter CD and select the user mode driver.

Using a printer connected to another computer

Clients can connect to the printer in three different ways:

- Install the printer software from the Starter CD. When prompted, select **Connected via the network**, and then select **Client Setup for client-server printing**.

- Browse to the printer on the network and drag the printer to your Printers folder.

- Add the printer and install the software from the INF file on your network. Ask the network administrator where the INF file is located.

On the Starter CD, the INF files are stored in folders using the following format: <CD>:\Setup\Drivers\<driver>\<operating system>\<language>.

For example, if your CD drive letter is D, then D:\Setup\Drivers\PCL6\Win2k_XP\English would contain the English PCL6 INF file for Windows 2000 and Windows XP.

Connecting directly using a USB cable (Mac OS)

Install the software first, and then connect the printer to the computer. On completing the installation, you can share the printer with other Mac OS users if you wish. See "Sharing a printer on a peer-to-peer network (Mac OS)."

1   Insert the Starter CD into the CD-ROM drive. The CD menu runs automatically.

    If the CD menu does not run automatically, double-click the CD icon on the desktop, and then double-click the Installer icon. This icon is located in the Installer:<language> folder of the Starter CD (for example, Installer:English for the English version).

2   Follow the instructions on the screen.

3   Connect the cable between the ports on the computer and the printer.

4   Turn the printer on.

5   Complete the installation in one of these ways:

    • *Mac OS 9 (9.1 and later):* Complete steps 6 through 10.

    • *Mac OS X (10.1 and later):* Complete steps 11 through 13.

Mac OS 9 (9.1 and later)

6   On the hard drive, double-click the Desktop Printer Utility icon in the Applications (Mac OS 9): Utilities folder.

7   On the pop-up menu, select **LaserWriter8**, select **Printer (USB)** from the list, and then click **OK**.

8   Make sure **HP Business Inkjet 2300** is selected and click **Select**.

9   In the **PostScript Printer Description (PPD) File** section of the window that appears, click **Auto Setup**.

10 Click **Create**. The printer icon appears on the desktop.

Mac OS X (10.1 and later)

11 Open the Print Center (located in the Applications\Utilities folder), and then click **Add Printer**.

12 On the pop-up menu, select **USB**.

13 Select **HP Business Inkjet 2300** from the list, and then click **Add**. A dot will appear beside the printer name or the printer name will appear in boldface type, indicating that this printer is now the default printer.

Sharing a printer on a peer-to-peer network (Mac OS)

1   On the computer that is connected to the printer, open USB Printer Sharing from Control Panels and share the printer. Then list the printer in a network neighborhood. For more information, see the Mac Help.

2   For other users who want to print, select the printer in the USB Printer Sharing control panel. Then choose the neighborhood where the printer is shared and choose the printer.

Connecting to a network
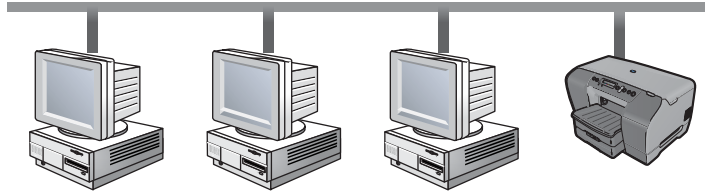
If the printer has an HP Jetdirect print server installed, it can be shared in a network environment by connecting it directly to the network. This configuration provides better performance than printing through non-network connections, and the ability to share the printer with both Windows and Mac OS users.

The HP Business Inkjet 2300n and 2300dtn come with an HP Jetdirect print server installed. If you purchased an HP Jetdirect print server for the HP Business Inkjet 2300, install it in the printer and connect the printer to the network. See "Installing an HP Jetdirect internal print server."

Installing the printer driver on a computer or server (Windows)

You must install the printer driver on the computer that is acting as the server.

1   Close any running applications.

2   Insert the Starter CD into the CD-ROM drive. The CD menu runs automatically.
    If the CD menu does not run automatically, click **Start**, and then click **Run**. At the command line box, type the letter of your computer's CD-ROM drive followed by `:\SETUP` (for example, type `D:\SETUP`).

3   On the CD menu, click **Install Printer Driver**.

4   Choose your language, and then click **OK**.

5   Follow the instructions on the screen.

6   When prompted for the connection type, select **Connected via the network** and click **Next**. Then, select **Basic network setup for a PC or server (recommended)** and click **Next**.

7   Follow the instructions on the screen to complete the installation.

8   To set up the computer as a server, do the following.

    a   Select the option to share the printer, and then select to install printer drivers for Windows clients. The installation program installs the printer driver for the server and copies the client drivers to a location on the server for users (clients).

    b   Follow the instructions on the screen to complete the installation.

To allow Windows users to share this printer, see "Installing the printer driver on a Windows client." To allow Mac OS users to share this printer, see "Installing software for a network printer on a Macintosh."

Installing the printer driver on a Windows client

Once the printer driver has been installed on the computer acting as the server, the printer can be shared. Individual Windows users who want to use the network printer will have to install the printer software on their computers (clients). A client computer can connect to the printer in the following ways:

- In the **Printers** folder, double-click the **Add Printer** icon and follow the instructions for a network printer installation.

- Install the printer software from the Starter CD. When prompted, select **Connected via the network**, and then select **Client Setup for client-server printing**.

- On the network, browse to the printer and drag it to your **Printers** folder.

- Add the printer and install the software from the INF file on your network. Ask the network administrator where the INF file is located.

On the Starter CD, the INF files are stored in folders using the following format: <CD>:\Setup\Drivers\<driver>\<operating system>\<language>.

For example, if your CD drive letter is D, then D:\Setup\Drivers\PCL6\Win2k_XP\English would contain the English PCL6 INF file for Windows 2000 and Windows XP.

To install the printer driver using Add Printer

1 From the Windows desktop, do one of the following:

- *Windows 98, Windows Me, Windows NT 4.0, and Windows 2000:*
  Click **Start**, point to **Settings**, and then click **Printers**.

- *Windows XP:*
  Click **Start**, and then click **Printers and Faxes**.
  Or, click **Start**, click **Control Panel**, and then click **Printers and Faxes**.

2 Double-click **Add Printer**, then click **Next**.

3 Do one of the following:

- *Windows 98, Windows Me, Windows 2000, and Windows XP:*
  Select **Network Printer**.

- *Windows NT 4.0:*
  Select **Network Printer Server**.

4 Click **Next**.

5 Do one of the following:

- Type in the network path or queue name of the shared printer and click **Next**. Click **Have Disk** when prompted to select the printer model.

- Click **Next** and locate the printer in the **Shared printers** list.

6 Click **Next** and follow the instructions on the screen to complete the installation.

Adding a network port to the printer

If you have already installed the printer software using the printer setup program, and you want to create a port to connect through the network to the printer via an HP Jetdirect print server, follow these instructions:

1   Right-click the printer in the Printers folder and click **Properties**.

2   Do one of the following:

   - *Windows NT, Windows 2000, and Windows XP:*
     Click the **Ports** tab, and then click **Add Port**.

   - *Windows 98 and Windows Me::*
     Click the **Details** tab, and then click **Add Port**.

3   Select a new HP standard port and assign it to the printer.

4   Click **OK**.

Installing software for a network printer on a Macintosh

Individual Mac OS users who want to use the network printer will have to install the printer software on their computers.

1   Insert the Starter CD into the CD-ROM drive. The CD menu runs automatically.

   If the CD menu does not run automatically, double-click the CD icon on the desktop, and then double-click the Installer icon. This icon is located in the Installer:<language> folder of the Starter CD (for example, Installer:English for the English version).

2   Follow the instructions on the screen.

3   Complete the installation in one of these ways:

   - *Mac OS 9 (9.1 and later):* Complete steps 4 through 8.
   - *Mac OS X (10.1 and later):* Complete steps 9 through 11.

Mac OS 9 (9.1 and later)

4   On the hard drive, double-click the Desktop Printer Utility icon in the Applications (Mac OS 9): Utilities folder.

5   On the pop-up menu, select **LaserWriter8**, select **Printer (AppleTalk)** from the list, and then click **OK**.

6   Make sure **HP Business Inkjet 2300** is selected, and click **Select**.

7   In the **PostScript Printer Description (PPD) File** section of the window that appears, click **Auto Setup**.

8   Click **Create**. The printer icon appears on the desktop.

You can also use the Chooser to select and add the printer. Open Chooser, select **LaserWriter**, select **HP Business Inkjet 2300**, and then click **Setup** to select the PPD file.

Mac OS X (10.1 and later)

9   Open the Print Center (located in the Applications\Utilities folder), and then click **Add Printer**.

10 Do one of the following:

   - If you are using an AppleTalk network, on the pop-up menu, select **AppleTalk**.

   - If you are using an LPR or TCP/IP network, on the pop-up menu, select **LPR Printer using IP**, and then type the IP address for the printer. Alternatively, on Mac OS X (10.2.3 and later), select **Rendezvous**, which allows for automatic discovery and connection of devices over any IP network.

11 Select **HP Business Inkjet 2300** from the list, and then click **Add**. A dot will appear beside the printer name or the printer name will appear in boldface type, indicating that this printer is now the default printer.

Uninstalling the printer software

Use the following procedures to uninstall the printer software.

Uninstalling software for Windows (all versions)

1   Close any running applications.

2   From the **Start** menu, open the Control Panel.

3   Double-click **Add/Remove Programs**.

4   Select the printer software that you wish to remove.

5   Click the button for adding or removing software.

6   To remove the printer software, select **Remove All**. To remove individual components, select **Modify the existing installation** (you will need to have the Starter CD in the CD-ROM drive).

7   Follow the instructions on the screen to complete the removal of the printer software or components.

Note   If you are using Windows NT 4.0, Windows 2000, or Windows XP, you must have administrator privileges to uninstall the printer software.

You can also run the uninstaller as follows: from the **Start** menu, point to **Programs**, point to **hp business inkjet 2300 series**, and then click **Uninstall hp business inkjet 2300 series** (the actual steps depend on your operating system). Follow the instructions on the screen to remove the printer software.

Note   If the software was not successfully installed, or the uninstaller could not be found, run the scrubber utility from the Starter CD. See the steps below.

Running the scrubber utility

1 Disconnect the printer from the computer.

2 On the computer, restart Windows.

3 Insert the Starter CD in the CD-ROM drive.

4 Locate the scrubber utility on the Starter CD and run the utility.

- *For Windows 98 and Windows Me:*
  Use the scrub9x.exe file located in the Utils\Scrubber\Win9x_Me folder.

- *For Windows 2000 and Windows XP:*
  Use the scrub2k.exe file located in the Utils\Scrubber\Win2k_XP folder.

2 Installing optional accessories

The following accessories are available for the printer.

- Auto-duplex unit
- HP Jetdirect print server
- Printer memory modules
- 500-sheet Tray 2

For information about ordering accessories, see "Ordering HP supplies and accessories."
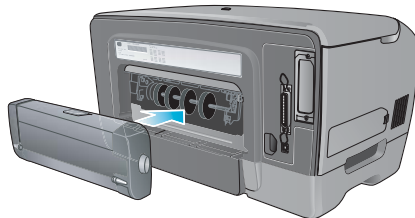
Auto-duplex unit

The printer can automatically print on both sides of the paper with the auto-duplex unit. If your printer does not have an auto-duplex unit, one can be purchased separately.

Installing an auto-duplex unit

1   Press ⏻ (power button) to turn off the printer.

2   Push the buttons on the rear access panel and remove the panel from the printer.
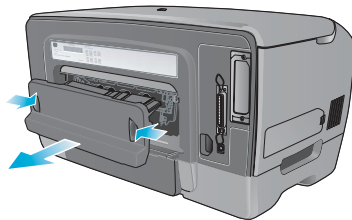
3   Slide the auto-duplex unit into the printer until the unit locks into place.

After installing the auto-duplex unit, you must enable it in the printer driver (see "Enabling optional accessories in the printer driver"). For information on using the auto-duplex unit, see "Printing on both sides of the page."

If you are using operating systems other than Windows or Mac OS, you do not need to enable the auto-duplex unit. To print on both sides of the page, turn on the DUPLEX setting in the control panel (Printing menu).

HP Jetdirect print server

Your printer can be shared in a network environment by connecting it directly to the network with an HP Jetdirect print server. An HP Jetdirect print server provides better performance than printing through non-network connections, and it provides flexibility in preparing a location for the printer. The HP Jetdirect print server can be used in both client-server and peer-to-peer printing configurations.

The HP Business Inkjet 2300n and 2300dtn come with an HP Jetdirect print server installed. For a list of HP Jetdirect print servers that can be purchased for the HP Business Inkjet 2300, see "Networking accessories."

Installing an HP Jetdirect internal print server

CAUTION The HP Jetdirect print server card contains electronic components that can be damaged by static electricity. To prevent buildup of static electricity, maintain frequent contact with any bare sheet metal surface on the printer. If possible, wear a grounding wrist strap (or similar device). Handle the print server card carefully at all times. Avoid touching electronic components or circuit paths.

1   Press ⏻ (power button) to turn off the printer, and then unplug the power cord.

2   Use a Phillips screwdriver to loosen and remove the two retaining screws holding the cover for the empty EIO slot onto the printer. Remove the cover. You will not need these screws and cover again.

3   Firmly insert the HP Jetdirect print server card into the EIO slot.
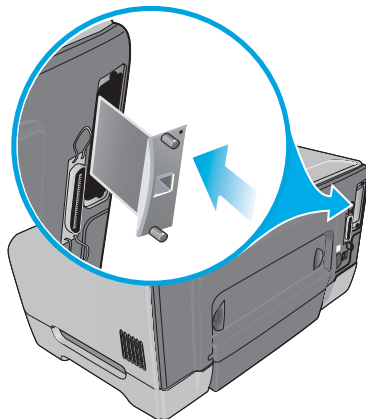
4   Insert and tighten the retaining screws that came with the HP Jetdirect print server card.

5   Connect a network cable between the HP Jetdirect print server card and the network.

Verifying that the printer works

1   Connect the power cord and turn on the printer.

2   Print a Configuration page.

   a   Press ✓ (select button) on the control panel.

   b   Press ▼ (down arrow button) to highlight `INFORMATION`, and then press ✓ (select button).

   c   Press ▼ (down arrow button) to highlight `PRINT CONFIGURATION`, and then press ✓ (select button).

Two pages should print. The second page is the Jetdirect Configuration page, which contains setup information (for example, LAN HW ADDRESS) that might be needed when you set up the printer on the network computers.

If the Jetdirect Configuration page does not print, uninstall and reinstall the print server card to ensure that it is completely seated in the slot.

Obtaining more information

If you encounter any problems or difficulty printing over a network, see the following resources.

Document	Description
HP Jetdirect Administrator's Guide	This guide, included on the Starter CD, provides detailed information about setting up and using your HP Jetdirect print server. The guide also provides information about the following: - HP Software Solutions for HP Jetdirect print servers - TCP/IP configurations - Using LPD (Line Printer Daemon) services on the HP Jetdirect print server - FTP printing - Configuration page messages and troubleshooting - Embedded Web server to access configuration and management pages for the print server and device
Documentation for the operating system and network operating system	This documentation came with your computer or your network operating system. The documentation describes basic network printing common to all network printers.

In addition to these resources, printer information and configuration features are available through HP Web Jetadmin. See "Using HP Web Jetadmin" for more information.

For more information about HP Web Jetadmin and other HP network printer software, visit http://www.hp.com/support/businessinkjet2300.

Printer memory modules

If you often print complex graphics or PostScript documents, or if you print with the optional auto-duplex unit, you might want to add more memory to the printer.

Note   Adding memory to the printer will allow it to process more complex print jobs, but might not increase processing speed.

The printer contains 64 MB of memory. It has two DIMM slots that accept 64 or 128 MB RAM. The printer can support up to 320 MB of memory (including the 64 MB in the printer). This additional memory is available for purchase as an accessory. For more information, see "Ordering HP supplies and accessories."

To find out how much memory is installed in the printer, print a Configuration page. See "Printing a Configuration page."

Installing a DIMM

CAUTION   DIMMs contain electronic components that can be damaged by static electricity. To prevent buildup of static electricity, maintain frequent contact with any bare sheet metal surface on the printer. If possible, wear a grounding wrist strap (or similar device). Handle DIMMs carefully at all times. Avoid touching electronic components or circuit paths.

Note   The DIMM slots are located at the left side of the printer. If your printer does not have a side cover on the left panel, see "If your printer does not have a side cover" for instructions on installing the DIMM.

1 If you have not already done so, print a Configuration page to find out how much memory is installed in the printer before adding more memory. See "Printing a Configuration page."

2 Press ⏻ (power button) to turn off the printer.

3 Unplug the power cord and disconnect any cables.

4 On the left side of the printer, unlatch and remove the side cover.

5 Remove the DIMM cover.
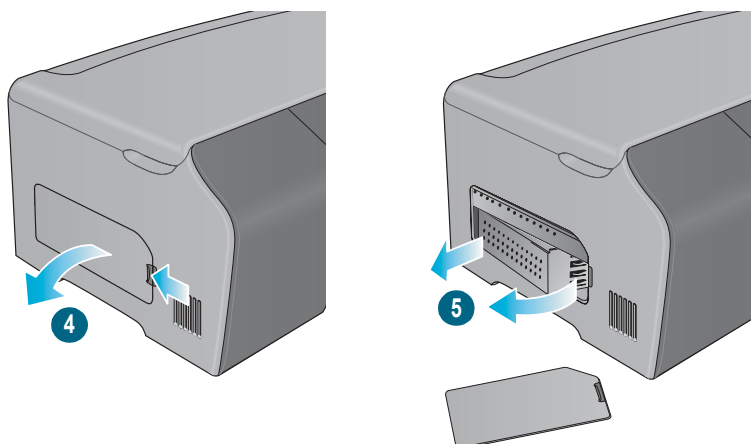
6 On an empty DIMM slot, push the DIMM locks outward to release the locks.

7 Remove the DIMM from the antistatic package.

8 Align the DIMM so that the notches on the lower edge line up with the raised marks in the DIMM slot.

9 Insert and press the DIMM into the slot until it snaps into place.
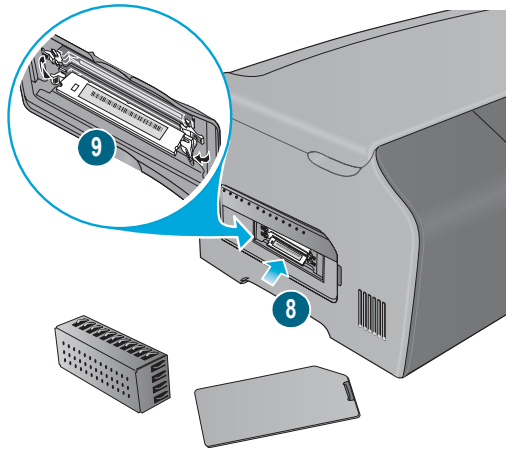
Note To remove a DIMM, release the locks on the DIMM slot by pushing them outward.

10 Replace the DIMM cover.

11 Replace the side cover.
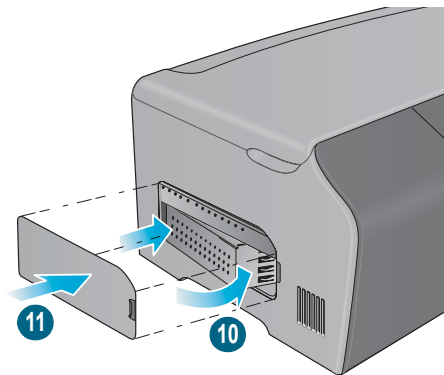
12 Reattach the power cord and any cables, and then turn on the printer.

Checking memory installation

Follow this procedure to verify that the DIMM is installed correctly.

1 Check that READY appears on the control panel when the printer is turned on. If an error message appears, a DIMM might have been installed incorrectly.

2 Print a new Configuration page. (See "Printing a Configuration page.")

3 Check the memory section on the Configuration page and compare that memory amount to the memory amount on the Configuration page that printed before the DIMM installation. If the amount of memory has not increased, one of the following problems might have occurred:

- The DIMM might not be installed correctly. Remove the DIMM and repeat the installation procedure.

- The DIMM might be defective. Try a new DIMM.

If your printer does not have a side cover

If your printer does not have a side cover on its left panel, follow these instructions to install the DIMM.

1   If you have not already done so, print a Configuration page to find out how much memory is installed in the printer before adding more memory. See "Printing a Configuration page."

2   Press ⏻ (power button) to turn off the printer.

3   Unplug the power cord and disconnect any cables.

4   Lift the printer off Tray 2.

5   Open the top cover.

6   Use a Phillips screwdriver to remove the screws at the top of the side access panel.

7   Grasp the top of the panel and remove it from the printer.
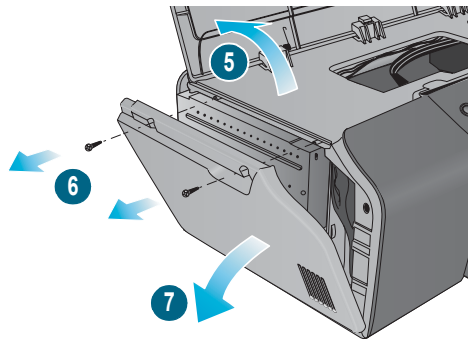
8   Remove the DIMM cover.

9   On an empty DIMM slot, push the DIMM locks outward to release the locks.

10 Remove the DIMM from the antistatic package. Align the DIMM so that the notches on the lower edge line up with the raised marks in the DIMM slot.

11 Insert and press the DIMM into the slot until it snaps into place.
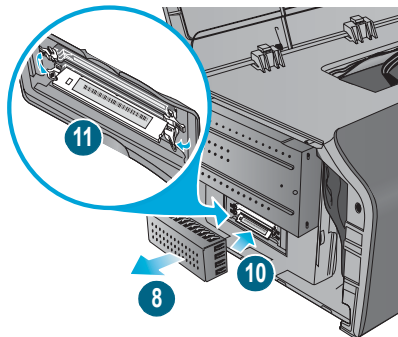
Note   To remove a DIMM, release the locks on the DIMM slot by pushing them outward.

12 Replace the DIMM cover.

13 Insert the hooks at the bottom of the side access panel into the corresponding slots on the printer, and then close the side access panel. You might have to apply some force to close the panel completely.
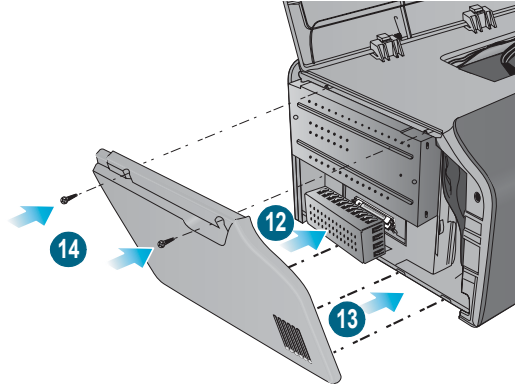
14 Replace and tighten the screws.

15 Set the printer on top of Tray 2.

WARNING!   Be careful to keep your fingers and hands clear of the bottom of the printer.

16 Reattach the power cord and any cables, and then turn on the printer.

17 Check that the DIMM is installed correctly. See "Checking memory installation."

500-sheet Tray 2

This optional Tray 2 can hold up to 500 sheets of plain paper, and replaces the 250-sheet Tray 2 that comes with the HP Business Inkjet 2300 and 2300n. The HP Business Inkjet 2300dtn comes with the 500-sheet Tray 2.

Installing Tray 2

1 Unpack the tray and remove the packing tape and cardboard insert. Move the tray to the prepared location.

2 Press ⏻ (power button) to turn off the printer, and then unplug the power cord.

3 Set the printer on top of the tray.

WARNING!   Be careful to keep your fingers and hands clear of the bottom of the printer.
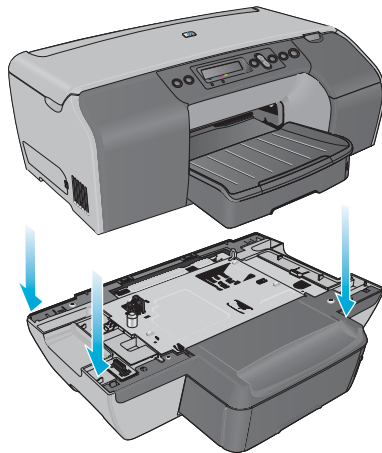
Enabling optional accessories in the printer driver

If you are using operating systems other than Windows or Mac OS, you do not need to enable the optional accessories.

To enable optional accessories in Windows

1   Do one of the following:

    - *Windows 98, Windows Me, Windows NT 4.0, and Windows 2000:*
      Click **Start**, point to **Settings**, and then click **Printers**.

    - *Windows XP:*
      Click **Start**, and then click **Printers and Faxes**.
      Or, click **Start**, click **Control Panel**, and then click **Printers and Faxes**.

2   Right-click the icon for the desired printer driver, and then click **Properties**.

3   Select one of these tabs: **Configure**, **Device Settings**, or **Device Options**. (The name of the tab depends on the printer driver and operating system.) On the selected tab, click the optional accessory you want to enable, choose **Installed** from the drop-down menu, and then click **OK**.

To enable optional accessories in Mac OS

Note   Mac OS X (10.1 and later) automatically enables all optional accessories in the printer driver when you install the printer software.

1   Click the printer's desktop printer icon.

2   On the **Printing** menu, click **Change Setup**.

3   On the **Change** pop-up menu, select the optional accessory you want to enable.

4   On the **To** pop-up menu, select **Installed**.

5   Click **OK**.

3 Using the printer

Selecting print media

The printer is designed to work well with most types of office paper and with 25 percent cotton bond paper. It is best to test a variety of print media types before buying large quantities. Find a media type that works well and is easy to purchase.

Supported media sizes

The following table lists the sizes of media that are compatible with the printer and shows which sizes can be used with the printer's paper trays and accessories.

Media	Tray 1	Tray 2*	Auto-duplex unit**
Standard paper sizes			
U.S. Letter (216 by 279 mm; 8.5 by 11 inches)	✓	✓	✓
U.S. Legal (216 by 356 mm; 8.5 by 14 inches)	✓	✓	
A4 (210 by 297 mm; 8.3 by 11.7 inches)	✓	✓	✓
U.S. Executive (184 by 267 mm; 7.25 by 10.5 inches)	✓	✓	✓
U.S. Statement (140 by 216 mm; 5.5 by 8.5 inches)	✓		
A5 (148 by 210 mm; 5.8 by 8.3 inches)	✓		✓
ISO B5 (176 by 250 mm; 6.9 by 9.8 inches)	✓		✓
JIS B5 (182 by 257 mm; 7.2 by 10.1 inches)	✓	✓	✓
Cards			
Index card (76 by 127 mm; 3 by 5 inches)	✓		
Index card (102 by 152 mm; 4 by 6 inches)	✓		
Index card (127 by 203 mm; 5 by 8 inches)	✓		
Hagaki (100 by 148 mm; 3.9 by 5.8 inches)	✓		
Ofuku Hagaki (148 by 200 mm; 5.8 by 7.9 inches)	✓		✓
A6 card (105 by 148 mm; 4.1 by 5.8 inches)	✓		
Envelopes			
U.S. #10 Envelope (105 by 241 mm; 4.125 by 9.5 inches)	✓		
A2 Envelope (111 by 146 mm; 4.375 by 5.75 inches)	✓		
Monarch Envelope (98 by 191 mm; 3.88 by 7.5 inches)	✓		
HP Greeting Card Envelope (111 by 152 mm; 4.375 by 6 inches)	✓		
DL Envelope (110 by 220 mm; 4.3 by 8.7 inches)	✓		
C5 Envelope (162 by 229 mm; 6.4 by 9 inches)	✓		

Media	Tray 1	Tray 2*	Auto-duplex unit**
C6 Envelope (114 by 162 mm; 4.5 by 6.4 inches)	✓		
Japanese Envelope Chou #3 (120 x 235 mm; 4.7 by 9.3 inches)	✓		
Japanese Envelope Chou #4 (90 x 205 mm; 3.5 by 8.1 inches)	✓		
Custom-size media (Tray 1) Between 76.2 to 216 mm wide and 127 to 356 mm long (3 to 8.5 inches wide and 5 to 14 inches long)	✓		
Custom-size media (Tray 2) Between 182 to 216 mm wide and 257 to 356 mm long (7.2 to 8.5 inches wide and 10.1 to 14 inches long)		✓	
Custom-size media (auto-duplex unit) Between 76.2 to 216 mm wide and 127 to 297 mm long (3 to 8.5 inches wide and 5 to 11.7 inches long)			✓

* Tray 2 refers to both the 250-sheet Tray 2 (provided with the HP Business Inkjet 2300 and 2300n) and the 500-sheet Tray 2 (provided with the HP Business Inkjet 2300dtn, also available as an accessory for the HP Business Inkjet 2300 and 2300n).

** The optional auto-duplex unit allows automatic printing on both sides of the paper.

Supported media types and weights

CAUTION   Some media, such as envelopes, cards, transparencies, and photo paper, can only be used with Tray 1. Using this media in Tray 2 or the auto-duplex unit can cause jams and might damage the printer and auto-duplex unit.

Tray	Media Type	Weight	Capacity
Tray 1	Paper	60 to 100 g/m^2 (16 to 28 lb bond)	Up to 150 sheets of plain paper (15 mm or 0.6 inch stacked)
	Transparencies		Up to 30 (8 mm or 0.3 inch stacked)
	Envelopes	75 to 90 g/m^2 (20 to 24 lb bond envelope)	Up to 22 (15 mm or 0.6 inch stacked)
	Cards	Up to 200 g/m^2 (110 lb index)	Up to 60 (15 mm or 0.6 inch stacked)
Tray 2	Paper	60 to 100 g/m^2 (16 to 28 lb bond)	Up to 250 sheets of plain paper (25 mm or 1 inch stacked) For the HP Business Inkjet 2300dtn, Tray 2 holds up to 500 sheets (50 mm or 2 inches stacked).
Auto-duplex unit	Paper	60 to 100 g/m^2 (16 to 28 lb bond)	1 at a time
	Cards (Ofuku Hagaki only)	Up to 160 g/m^2 (90 lb index)	1 at a time
Output tray	All supported media		Up to 100 sheets plain paper (text printing)

Recommended HP media

The following table shows which media can be used with the printer's trays and auto-duplex unit. For information about ordering HP media, see "Ordering HP supplies and accessories."

Media	Tray 1	Tray 2	Auto-duplex unit
Plain paper: ● HP Bright White Inkjet Paper ● HP Office Paper ● HP Office Recycled Paper ● HP Multipurpose Paper ● HP Printing Paper ● HP Everyday Paper ● HP Everyday Copy & Print Paper	✓	✓	✓
HP Premium Paper	✓		
HP Premium Inkjet Heavyweight Paper	✓		✓
HP Premium Inkjet Transparency Film	✓		
HP Premium Plus Inkjet Transparency Film	✓		
HP Everyday Photo Paper	✓		✓
HP Colorfast Photo Paper	✓		
HP Premium Plus Photo Paper	✓		
HP Premium Photo Paper	✓		
HP Photo Paper	✓		
HP Brochure and Flyer Paper	✓		✓

Minimum margins

The document margins must match or exceed these minimum settings in portrait orientation. The illustration below shows which side of the paper and envelope corresponds to each margin.
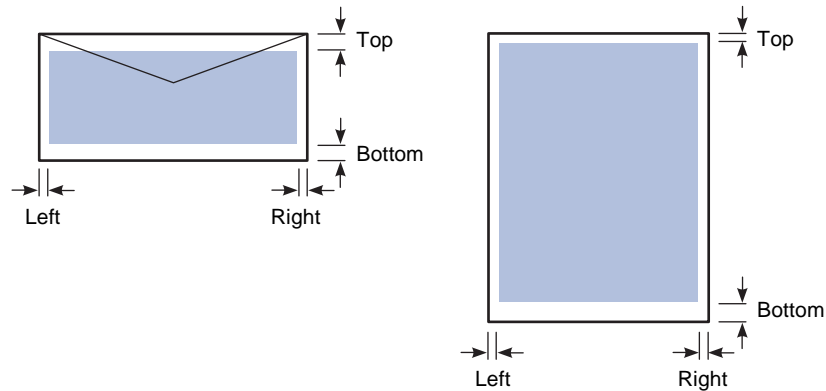
Media	Left margin	Right margin	Top margin	Bottom margin
Letter, legal, executive, statement	6.4 mm (0.25 inch)	6.4 mm (0.25 inch)	3.0 mm (0.12 inch)	12.7 mm (0.50 inch)
A4, A5, ISO B5, JIS B5, and cards	3.4 mm (0.13 inch)	3.4 mm (0.13 inch)	3.0 mm (0.12 inch)	12.7 mm (0.50 inch)
Envelopes	3.4 mm (0.13 inch)	3.4 mm (0.13 inch)	12.7 mm (0.50 inch)	12.7 mm (0.50 inch)
Custom-size media (Tray 1, Tray2)	6.4 mm (0.25 inch)	6.4 mm (0.25 inch)	3.0 mm (0.12 inch)	12.7 mm (0.50 inch)
Custom-size media (auto-duplex unit)	6.4 mm (0.25 inch)	6.4 mm (0.25 inch)	12.7 mm (0.50 inch)	12.7 mm (0.50 inch)

Note   When you are using the auto-duplex unit, the top and bottom margins must be at least 12.7 mm (0.5 inch).

Loading print media

You can load up to 150 sheets of paper in Tray 1 and 250 sheets of paper in Tray 2. For the HP Business Inkjet 2300dtn printer, Tray 2 holds up to 500 sheets of plain paper. This 500-sheet Tray 2 is also available as an optional accessory for the HP Business Inkjet 2300 and HP Business Inkjet 2300n.

Use Tray 1 for media types such as envelopes, cards, transparencies, and photo paper.

Tips for loading media

- Always use media that conforms to the printer specifications. For more information about the media that can be used with the printer, see "Selecting print media."

- When loading a tray, position the media print side down with the right edge of the media against the right edge and front guide of the tray. For preprinted forms and letterhead, load the media with the top edge feeding into the printer first.

- To prevent jams, load only one type of media at a time into a tray. Also, when adding media, always remove the existing media and realign the media width and length guides to fit the new media. For more information about avoiding media jams, see "Tips for avoiding jams."

Loading Tray 1 or Tray 2

1   Pull the tray out of the printer.

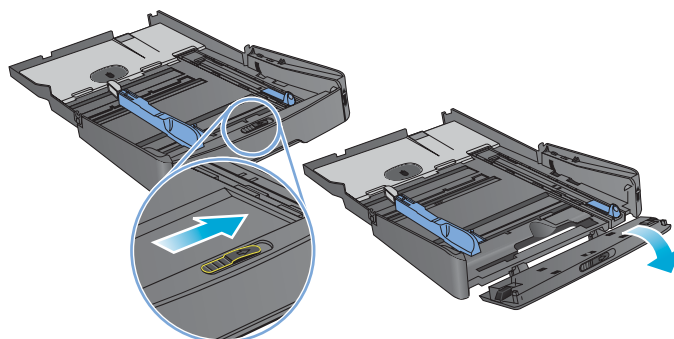2   If you are loading Tray 1, raise and remove the output tray.
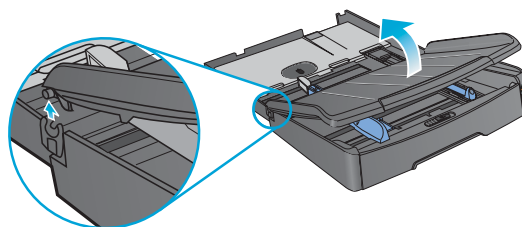
3   If you are loading paper between 279 mm and 356 mm long (11 inches to 14 inches long), move the latch on the tray to the right and lower the front of the tray.
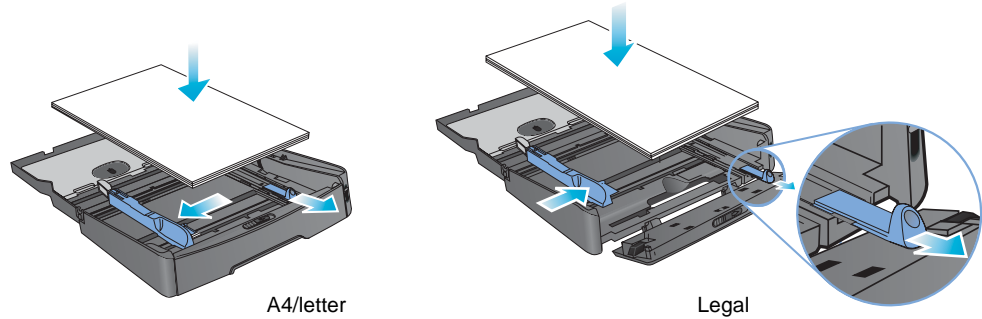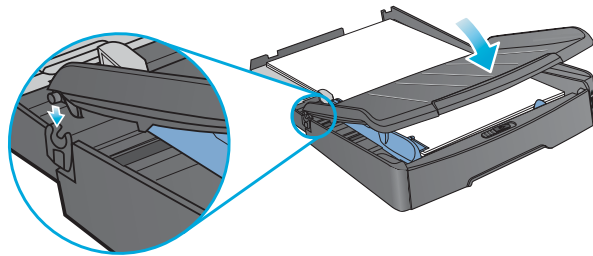
Note   You do not need to lower the front of the tray when loading A4-size or letter-size paper.

4 Slide the media length guide and media width guide to the markings in the tray for the size you are loading. Then place the media in the tray.

A4/letter   Legal

5 If you are loading Tray 1, reattach and close the output tray.

6 Slide the tray into the printer.

CAUTION   Do not raise the front of the tray if legal paper is loaded, or damage to the paper or printer can result.

7 Pull out the extension on the output tray.
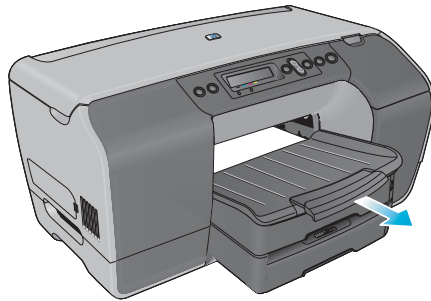
8 When printing, select the appropriate media type and size in your application or printer driver.

Selecting trays

When you print a document, you can allow the printer to select the tray for the print job, or you can select a specific tray. These settings are available in the **Source is** or **Paper Source** drop-down menu in Windows printer drivers, and in the **All pages from** pop-up menu in the Mac OS printer driver.

If you do not select a tray in the printer driver, the printer automatically selects a tray. By default, the printer draws paper from Tray 2 first. However, if the media type or size for the print job are not supported by Tray 2, the printer draws media from Tray 1.

Printing using the printer drivers

In most situations, you will probably print documents using the printer driver. Although specific options vary depending on the software application you are using, you can usually gain access to the printer driver by clicking **File**, and then **Print** in the software application.

For more information about printer driver features, see the printer driver online help. For more information about printing from a specific software application, see the documentation for the software application.

To print using the PCL 5c or PCL 6 printer driver

1   Open the document you want to print.

2   On the **File** menu, click **Print**.

3   On the **Name** drop-down menu, select the PCL 5c or PCL 6 printer driver, and then click **Properties** or **Setup**. (The options might be different for your application.)

4   On the **Source is** drop-down menu, select the location of the media on which you want to print.

   •   If you want to print from a specific tray, select **Tray 1** or **Tray 2**.

   •   If you want to print an envelope, card, or other special media using Tray 1, select **Manual Feed in Tray 1**.

5   On the **Type is** drop-down menu, select the type of media you want to print.

6   Select a **Print Quality** setting.

7   Change other print settings, if necessary, and then click **OK**.

8   Click **Print**.

To print using the emulated PostScript printer driver

1   Open the document you want to print.

2   On the **File** menu, click **Print**.

3   On the **Name** drop-down menu, select the emulated PostScript (PS) printer driver, and then click **Properties** or **Setup**. (The options might be different for your application.)

4   Select the type of media on which you want to print:

   •   *Windows 98 and Windows Me:* Click **More Options** and then click **OK**. On the **Paper type** drop-down menu, select the media type.

   •   *Windows NT 4.0:* On the **Advanced** tab, select **Media** on the upper scrolling menu. In the **Change Media Settings** menu, select the media type.

   •   *Windows 2000 and Windows XP:* On the **Paper/Quality** tab, on the **Type is** drop-down menu, select the media type on which you want to print.

5   On the **Source is** drop-down menu, select the location of the media on which you want to print.

   This menu is located on the **Paper** tab for Windows 98 and Windows Me, the **Advanced** tab for Windows NT 4.0, or the **Paper/Quality** tab for Windows 2000 and Windows XP.

   •   If you want to print from a specific tray, select **Tray 1** or **Tray 2**.

   •   If you want to print an envelope, card, or other special media using Tray 1, select **Manual Feed in Tray 1**.

6 Select a print quality setting for the print job:

- *Windows 98 and Windows Me:* On the **Device Options** tab, on the **Printer** features list, select **Print Quality.** On the **Change setting for** drop-down menu, select the print mode.

- *Windows NT 4.0:* In the upper scrolling menu of the **Advanced** tab, expand **Document Options**, and then expand **Printer Features**. On the **Change 'Print Quality' Setting** menu, select the print mode.

- *Windows 2000 and Windows XP:* On the **Paper/Quality** tab, on the **Print Quality** drop-down menu, select the print mode.

7 Change other print settings, if necessary, and then click **OK**.

8 Click **Print** or **OK**.

Changing printer settings

Changing settings in Windows

You can change printer settings from a software application, from the printer driver, and from the control panel. You need to change the printer settings when you change media sizes or types, or when you want to use optional features such as printing on both sides of the paper.

Note   Settings in a software application (for example, media size) always take precedence over settings in the printer driver or the control panel.

If you want to set printing options only for the documents you are printing from a particular application, change the settings from the application. After you close the application, the printer settings will return to the defaults configured in the printer driver.

If you want to set printing options for all software applications you use on the computer, change the default settings in the printer driver. To do so, you must open the printer driver from the **Start** menu.

To change settings in an application

With a document open in the application, do the following:

1 On the **File** menu, click **Print**.

2 Select the printer driver (PCL 5c, PCL 6, or PS) and then click **Setup** or **Properties**. (The options might be different for your application.)

3 Change the settings and click **OK**.

4 Click **Print** or **OK** to print the document.

To change default settings in the printer driver

1   From the Windows desktop, do one of the following:

   • *Windows 98, Windows Me, Windows NT 4.0, and Windows 2000:*
     Click **Start**, point to **Settings**, and then click **Printers**.

   • *Windows XP:*
     Click **Start**, and then click **Printers and Faxes**.
     Or, click **Start**, click **Control Panel**, and then click **Printers and Faxes**.

2   Right-click the printer icon, and then choose the option for your operating system:

   • *Windows 98 and Windows Me:* Click **Properties.**

   • *Windows NT 4.0:* Click **Document Defaults** or **Properties**.

   • *Windows 2000 and Windows XP:* Click **Printing Preferences** or **Properties**.

3   Change the desired settings, and then click **OK**.

Changing settings in Mac OS

You can change printer settings from the **Page Setup** and **Print** dialog boxes in Mac OS, or from the control panel. Settings in Mac OS override settings in the control panel.

You can also select the default printer. The default printer is the one that is used if you choose the **Print** command without first specifying which printer you want to use with an application. The default printer should be the printer that you use most often.

For more information about changing printer settings, see the Mac Help on your computer.

To change page setup settings

1   Open the document you want to print.

2   On the **File** menu, click **Page Setup**.

3   From the **Format for** pop-up menu, select the printer for which you want to format the document, and then change the desired settings (such as the page size).

4   On the **Paper** pop-up menu in Mac OS 9 (9.1 and later) or the **Paper Size** pop-up menu in Mac OS X (10.1 and later), select the media size on which you want to print.

5   Click **OK**.

To change print settings

1   Open the document you want to print.

2   On the **File** menu, click **Print**.

3   Select the location of the media or the type of media on which you want to print:

   • *Mac OS 9 (9.1 and later):* On the pop-up menu, select **General**. Click **All pages from**, and then select the media source or the media type.

   • *Mac OS X (10.1 and later):* On the pop-up menu, select **Paper Feed**. Click **All pages from**, and then select the media source. Select **Printer Features** to change the media type.

4   Change any other settings (such as the print quality).

5   Click **Print**.

Printing on special media

In addition to printing on plain paper, you can print on special media, including the following types:

● cards and envelopes

● transparencies

● custom-size media

Note   Always load special media in Tray 1, and select the correct media type, the print quality, and the media source before printing.

For information about supported media types and sizes, see "Selecting print media."

Printing on cards and envelopes

Note   If your software application supports printing on cards or envelopes, follow the application's instructions to print the card or envelope.

To print on cards and envelopes

1 Remove Tray 1 from the printer.

2 Remove the output tray and then remove all media from Tray 1.

3 Insert the cards or envelopes into the tray (envelopes with the flaps facing up and to the right).

4 Slide the media width and length guides to the edges of the cards or envelopes.

5 Replace the output tray and insert Tray 1 into the printer.

6 Print from your application, making sure you select the correct media size and type.

   For more information about setting the printing options, see "Changing printer settings."

Printing on transparencies

When printing on transparencies, follow these guidelines:

● Use Tray 1 to print on transparencies. Load a maximum of 30 transparencies in the tray.

● Handle transparencies using the edges. Oils from your fingers can cause print quality problems.

● Use HP Premium Inkjet Transparency Film or HP Premium Plus Inkjet Transparency Film, which is specifically designed to work with your printer, or use other transparencies designed to work with HP Inkjet printers. For information about ordering transparencies, see "Ordering HP supplies and accessories."

To print on transparencies

1 Remove Tray 1 from the printer.

2 Remove the output tray and then remove all media from Tray 1.

3 Insert the transparencies into the tray, with the rough side down and the adhesive strip pointing forward.

4 Slide the media width and length guides to the edges of the transparencies.

5 Replace the output tray and insert Tray 1 into the printer.

6 Print from your application, making sure you select the correct media size and type.

   For more information about setting the printing options, see "Changing printer settings."

7 Remove each transparency as it prints and set it aside to dry. Allowing the transparencies to stack up may cause smearing.

Printing on custom-size media

- Use Tray 1 when printing on media that is 76.2 to 216 mm wide and 127 to 356 mm long (3 to 8.5 inches wide and 5 to 14 inches long).

- If your application supports custom-size media, set the media size in the application before creating and printing the document. If your application does not support custom-size media, set the size in the printer driver, create the document, and then print it. (You might need to reformat existing documents to print them correctly on custom paper sizes.)

To print custom-size media

1 Remove Tray 1 from the printer.

2 Remove the output tray and then remove all media from Tray 1.

3 Insert the custom-size media into the tray.

4 Slide the media width and length guides to the edges of the media.

5 Replace the output tray and insert Tray 1 into the printer.

6 Print from your application, making sure you select the correct media size and type.

   For more information about setting the printing options, see "Changing printer settings."

Printing photographs

The photographs that you take with your digital camera can be printed from a software application such as HP Photo Printing Software.

Use **Best** print quality to print photographs. In this mode, printing takes longer and more memory is required from your computer.

This printer can produce up to 4800 by 1200 optimized dpi on photo papers using the following printer drivers:

Printer driver	Operating system
PCL 6	Windows 98, Windows Me, Windows NT 4.0, Windows 2000, and Windows XP
PS	Windows 2000, Windows XP, Mac OS 9 (9.1 and later), and Mac OS X (10.1 and later)

Printing in this mode may require additional memory, depending on the size and resolution of the image being printed. For example:

Image resolution	Image size	Extra memory required
600 dpi	203 by 254 mm (8 by 10 inches)	128 MB
1200 dpi	102 by 152 mm (4 by 6 inches)	128 MB

Remove each sheet of media as it prints and set it aside to dry. Allowing wet media to stack up can cause smearing.

To purchase additional memory, see "Ordering HP supplies and accessories."

To print digital photographs (Windows)

1 Load the appropriate media in Tray 1. Be sure to load the media with the print side down.

2 On the **File** menu of the application, click **Print**, and then click **Properties**. (The actual steps can vary; this is the most common method.)

3 On the **Paper/Quality** tab, select the media type you are using from the **Type is** menu (for example, HP Premium Photo Paper).

4 Under **Print Quality**, click **Best**.

5 Select the media size from the **Size is** menu.

6 Change any other print settings if necessary.

7 Click **OK** to close the dialog box.

8 Click **OK** to print.

To print digital photographs in Mac OS 9 (9.1 and later)

1 Load the appropriate media in Tray 1. Be sure to load the paper with the print side down.

2 On the **File** menu of the application, click **Print**.

3 On the pop-up menu, select **General**. Click **All pages from** and select the media type you are using (for example, HP Premium Photo Paper).

4 On the pop-up menu, select **Printer Specific Options**. Click **Print Quality** and select **Best** or **4800x1200-optimized dpi**. Click **HP Resolution** to select the resolution.

5 Change any other print settings if necessary.

6 Click **Print**.

To print digital photographs in Mac OS X (10.1 and later)

1 Load the appropriate media in Tray 1. Be sure to load the paper with the print side down.

2 On the **File** menu of the application, click **Print**.

3 On the pop-up menu, select **Printer Features**. Click **Media Type** and select the media type you are using (for example, HP Premium Photo Paper).

4 On the pop-up menu, select **Image Quality**. Click **Print Quality** and select **Best**. Click **HP Resolution** to select the resolution.

5 Change any other print settings if necessary.

6 Click **Print**.

Printing on both sides of the page

The printer can automatically print on both sides of media with the optional auto-duplex unit.

Note   Make sure the auto-duplex unit has been configured in the printer driver you are using. For more information, see "Enabling optional accessories in the printer driver."

Guidelines for duplexing

When printing on both sides of the page, follow these guidelines.

- The auto-duplex unit supports the following media sizes: letter, executive, A4, A5, ISO B5, JIS B5 and Ofuku Hagaki card. It can also be used for custom-size media that is between 76.2 to 216 mm wide and 127 to 297 mm long (3 to 8.5 inches wide and 5 to 11.7 inches long).

- Do not print on both sides of transparencies, envelopes, photo paper, brochure paper, glossy media, or paper lighter than 60 g/m^2 (16 lb bond) or heavier than 100 g/m^2 (28 lb bond). Jams might occur with these types of media. However, double-sided special media made exclusively by HP can be used with the auto-duplex unit.

- To print on both sides of a page, make the selection from the software application or printer driver. See "Performing automatic duplexing."

  If you are using operating systems other than Windows or Mac OS, turn on the DUPLEX setting in the control panel (Printing menu).

- The minimum top and bottom margins should be 12.7 mm (0.5 inch).

- When using media such as letterhead, preprinted media, and media with watermarks and prepunched holes, make sure you load the media in the tray with the front side facing down.

- When automatically printing on both sides of a page, one side of the page is printed first, and the printer pauses while the ink dries. To print the second side, the page must partially exit the printer to be flipped. When printing is complete, the paper is dropped on to the output tray. Do not attempt to remove the page from the printer until both sides have finished printing.

Performing automatic duplexing

Before printing, make sure the auto-duplex unit has been enabled in the printer driver (see "Enabling optional accessories in the printer driver").

To perform automatic duplexing (Windows)

1   Load the appropriate paper in Tray 1 or Tray 2. Be sure to load the paper with the front side facing down.

2   On the **File** menu of the application, click **Print**, and then click **Properties**. (The actual steps can vary; this is the most common method.)

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

4   When duplexing, the top margin might need to be increased slightly to make sure the pages align. This may cause the contents of a page to overflow to the next page. Select the **Preserve Layout** check box to reduce the page contents so that your page layout is not affected.

5   Select or clear the **Flip Pages Up** check box depending on which way you want the binding. See the graphics in the printer driver for examples.

6   Click **OK** to close the dialog box.

7   Click **OK** to print.

To perform automatic duplexing in Mac OS 9 (9.1 and later)

1   Load the appropriate paper in Tray 1 or Tray 2. Be sure to load the paper with the front side facing down.

2   On the **File** menu of the application, click **Print**.

3   On the **Layout** panel, select the **Print on Both Sides** check box, and select the binding orientation you want (select the correct icon).

4   Click **OK**.

To perform automatic duplexing in Mac OS X (10.1 and later)

1   Load the appropriate paper in Tray 1 or Tray 2. Be sure to load the paper with the front side facing down.

2   On the **File** menu of the application, click **Print**.

3   On the **Duplex** panel, select the **Print on Both Sides** check box and the binding orientation you want (select the correct icon).

4   Print the document.

Canceling a print job

You can cancel a print job in these ways:

- Press ✕ (cancel job button) on the printer.
  Pressing the ✕ (cancel button) clears the job that the printer is currently processing. It does not affect jobs waiting to be processed.

- For Windows, double-click the printer icon that appears in the lower right corner of the computer screen. Select the document you want to cancel. From the **Document** menu, click **Cancel**.

- For Mac OS 9 (9.1 and later), double-click the desktop printer icon, select the print job, and then click **Trash**.

- For Mac OS X (10.1 and later), click the **Print Center** icon. In the **Printer List** dialog box, double-click the printer icon. In the **HP Business Inkjet 2300** dialog box, select the print job and click **Delete**.

4 Using diagnostics tools

Using the Toolbox

The Toolbox provides status and maintenance information about your printer. It also provides links to the online user's guide for step-by-step guidance for basic printing tasks and help for solving problems. The Toolbox is available for Windows only.

To monitor a printer on a shared port (for example, \\portname\printername) from a client machine, the Toolbox must be running on the server machine as well as the client machine.

To open the Toolbox, from the **Start** menu, point to **Programs**, point to **hp business inkjet 2300 series**, and then click **hp business inkjet 2300 series Toolbox**.

The Toolbox has two tabs: the **Printer Status** tab and the **Information** tab.

Printer Status tab

The **Printer Status** tab displays ink levels and the printer status. The drop-down list displays the currently selected printer. Below the list, the status box displays the printer's status.

Use the following buttons in the Printer Status tab to view the information and select Toolbox message preferences.

Button	What clicking the button does
Order Supplies	Opens a temporary HTML file containing a disclaimer and agreement to send your information to the HP website. If you accept the disclaimer, you are connected to the HP website for ordering supplies.
Ink Cartridge Information	Opens a dialog box showing the order numbers and expiry dates of the installed cartridges. The **Supplies Information** button in this dialog box displays information on ordering replacement cartridges for your printer.
Preferences	Opens a dialog box that lets you select which Toolbox messages appear. You can specify whether you want to be notified by an audio alert when an error occurs, as well as the types of error messages you want to see. For example, you can choose to see only messages about paper and hardware.
	You can also choose to enable myPrintMileage AutoSend, which will provide you with a closer forecast of your printer usage in the myPrintMileage website.

Information tab

The **Information** tab lets you register the printer and get help on using the printer, solving problems, and contacting HP support. You can also gain access to myPrintMileage and HP Instant Support, and display printer hardware and printhead health information. If the printer is connected to a network, you can also display the embedded Web server by clicking **Launch**.

Use the buttons on the **Information** tab to gain access to the information and tools.

Button	What clicking the button does
Launch	Opens the embedded Web server if the printer is connected to a network. For more information about the embedded Web server, see "Using the embedded Web server."
myPrintMileage	Opens the myPrintMileage website which shows your printer usage information, such as the sizes of print jobs, ink cartridge usage, and media usage. This feature is also available through the embedded Web server.
Printer Hardware	Displays hardware information such as the printer model number and service identification number.
Printhead Health	Displays information about the condition of each printhead.
HP Instant Support	Opens the HP Instant Support website which provides customized problem-solving information and troubleshooting tips. For more information about HP Instant Support, see "Using HP Instant Support."
Register Your Printer	Displays instructions that guide you through registering the printer online.
How Do I?	Displays step-by-step instructions for completing printer tasks.
Troubleshooting	Displays step-by-step help for common printer problems.
Contact HP	Displays information on how to contact HP support.

Using the embedded Web server

The printer comes with an embedded Web server. When the printer is connected to a network, the embedded Web server is automatically available.

The embedded Web server allows you to view printer and network status and to manage printing functions from your computer instead of from the control panel. Using a standard Web browser, this remote management tool allows you to do the following:

- view printer status information
- view supplies status and order new supplies
- view the usage and event log
- receive notification of printer and supplies events
- configure settings such as language and security information
- perform printer maintenance tasks
- view and change network configuration

System requirements

To use the embedded Web server, you must have the following:

- a TCP/IP-based network (IPX/SPX-based networks are not supported)

- a Web browser installed on your computer, either Netscape Navigator 4.8 or Microsoft Internet Explorer 5.0 and above

The printer must be connected to the network. You cannot use the embedded Web server when the printer is connected directly to a computer.

You can open and use the embedded Web server without being connected to the Internet. However, some features will not be available. You cannot view the embedded Web server pages from outside a firewall.

To access the embedded Web server

You can gain access to the embedded Web server in the following ways:

- **From the Toolbox (Windows only)**

  Launch the embedded Web server from the **Information** tab in the Toolbox. The default Web browser for the computer opens and displays the embedded Web server information.

- **From a Web browser (Windows and Mac OS)**

  In a supported Web browser on your computer, type the IP address assigned to the printer. For example, if the printer's IP address is 123.123.123.123, you would type http://123.123.123.123 into your Web browser.

The printer IP address is listed on the Configuration page. For more information, see "Printing a Configuration page." After you gain access to the embedded Web server, you can bookmark it so that you can return to it quickly in the future.

Embedded Web server pages

The embedded Web server has three tabs that contain detailed information about the printer, and links to other e-services.

- Information tab

- Settings tab

- Networking tab

The current printer status appears in the top-right corner of the Web browser window. Links to other e-services appear in the Other Links section at the bottom of the Information and Settings tabs.

Information tab

The Information pages of the embedded Web server provide a summary of the configuration and status of the printer and its supplies.

STATUS	
Printer	This page displays information about the printer, such as the model and serial number of the printer, and the trays and memory installed. Ink cartridge levels are also shown.
Ink Supplies	Select **Status** to see the current ink cartridge levels and printhead health status for the printer. Select **Pages Remaining** to see the estimated number of pages that can be printed with the remaining ink for full color, business color, or black text documents.
Usage	These pages show the usage statistics: ● **Consumables** shows the amounts of ink and media used. ● **Job** shows the number of pages printed and ink used per user, for the last 20 print jobs. ● **Users** shows the number of pages printed and ink used by the top 10 users.
Event Log	This page shows the 10 most recent items in the printer event log. The most recent item appears at the top of the list.

Settings tab

The Settings pages of the embedded Web server allow you to configure the printer from your computer. These pages can be password protected. Always consult with your network administrator before changing the printer's configuration.

ALERTS	
Notification	This page allows you to add the e-mail addresses of the people who will receive electronic notification of printer events, such as ink supplies and media path events. You are provided with three e-mail lists, which you can rename as needed. You can add up to two e-mail addresses to each list. In addition, this page lets you configure the outgoing e-mail server settings that the embedded Web server uses when sending e-mail notification of printer events.
AutoSend	This page allows you to send printer usage information to HP automatically. HP uses this information in the myPrintMileage page to help you understand your printing patterns. With this information, you can estimate the amount of ink and paper you use each month, thus allowing you to manage your printing supplies more effectively. The printer usage information includes the tracking of usage by individual users. When **Enable User ID** is *not* selected (the default), the user information that is sent to HP is encrypted and real user names are not shown in the myPrintMileage page. Select **Enable User ID** if you want real user names to be shown in the myPrintMileage page. If AutoSend is enabled, the embedded Web server automatically sends the usage information to HP. HP will treat this information in the manner set out in the Hewlett-Packard Online Privacy Statement (http://www.hp.com/country/us/eng/privacy.htm.) Note: Before you use AutoSend, you must configure the outgoing e-mail settings in the Notification page.

Asset Tracking	This lets you name the printer and assign an asset number.
Media Handling	This page lets you configure the printer's media-handling settings. For more information about these settings, see the Paper Handling menu.
Security	This configures the password information for the embedded Web server. This information should only be configured by the network administrator.
Language	This page allows you to change the language for the embedded Web server as well as the printer's control panel.
Usage Tracking	This page shows a summary of the usage statistics, and allows you to reset the Users statistics. (Users statistics are displayed when you select the **Information** tab, **Usage**, and then **Users** tab).
Customized Link	This page lets you add a link to a Web page. The links you add appear in the Other Links section, which can be found at the bottom of the Information and Settings tabs.

MAINTENANCE

Diagnostic	This page allows you to perform printer troubleshooting and maintenance tasks, such as testing media paths in the printer, aligning printheads, and cleaning printheads.

Networking tab

The Networking pages of the embedded Web server allow the network administrator to configure the HP Jetdirect print server for the printer. This tab will not appear if the printer is connected to a network using anything other than an HP Jetdirect print server card.

Refer to the online help and to the *HP Jetdirect Administrator's Guide* for more information. This guide is located on the Starter CD.

Other Links

The following e-services are available from the Information and Settings tabs. You must have an Internet connection to use these e-services.

HP Instant Support	HP Instant Support is a Web-based tool that provides you with product-specific services, troubleshooting tips, and information about your printer's ink and media usage. With this information, you can diagnose and solve printer problems, and manage your printing activities and printer supplies more effectively.
	To use this tool, detailed printer information, such as serial number, error conditions, and status, is sent to HP. For more information about HP Instant Support, see "Using HP Instant Support."
myPrintMileage	This helps you manage your printing activities and printer supplies more effectively. For more information, see "Using myPrintMileage."
Order Supplies	This page shows the remaining life of the different ink cartridges and provides links for the online ordering of supplies, such as ink cartridges and print media.

Note If you use a dial-up connection and did not connect when you first opened the embedded Web server, you must connect before you can visit these websites. Connecting might require you to close the embedded Web server and reopen it.

Using HP Instant Support

HP Instant Support is a Web-based tool that provides you with product-specific services, troubleshooting tips, and information about your printer's ink and media usage. With this information, you can diagnose and solve printer problems, and manage your printing activities and printer supplies more effectively.

HP Instant Support provides the following information about your printer:

- **Easy access to troubleshooting tips**

  To help you quickly resolve printer problems or prevent some problems from happening, HP Instant Support provides tips that are customized for your printer.

- **Resolution of specific printer errors**

  HP Instant Support provides immediate access to information that can help you resolve error messages specific to your printer. To see a description of the problem, as well as recommendations for solving or preventing the problem, click the link within the message. To see a list of past printer errors, click **Alerts** on the left side of the HP Instant Support page.

- **Notification of printer driver and firmware updates**

  When a firmware or driver update for your printer is available on the HP website, a message appears on the HP Instant Support homepage. Click the link within the message to go directly to the download section of the HP website.

- **Obtaining support services**

  HP offers a variety of support services that can help you maintain your printer. HP Instant Support creates a list of the support services available for your printer. To learn more about these services or to purchase a service, click the appropriate link.

- **Managing ink and media usage (myPrintMileage)**

  myPrintMileage helps you manage your printing activities and printer supplies. This tool tracks your printer usage information to help you plan the purchase of supplies.

To access HP Instant Support

You can use HP Instant Support from the Toolbox (Windows users only) or from the embedded Web server if the printer is connected to an IP-based network.

- **From the Toolbox (Windows only)**

  On the Information tab in the Toolbox, click **HP Instant Support**. Follow the instructions to display the current HP Instant Support information for your printer.

- **From the embedded Web server**

  In a Web browser, type the IP address assigned to the printer. In the Other Links section of the Information or Settings tab, click **HP Instant Support**.

Note   Do not bookmark Web pages used to display HP Instant Support. If you bookmark this site and connect to it using the bookmark, the pages will not display the current information. Instead, connect from the embedded Web server or from the Toolbox.

Security and privacy

To use HP Instant Support, detailed printer information, such as serial number, error conditions, and status, is sent to HP. Hewlett-Packard respects your privacy and manages this information according to the guidelines outlined in the Hewlett-Packard Online Privacy Statement (http://www.hp.com/country/us/eng/privacy.htm).

Note
To view all the data that is sent to Hewlett-Packard, select **Source** (for Internet Explorer) or **Page Source** (for Netscape) from the View menu in your Web browser.

Using myPrintMileage

myPrintMileage keeps track of your printer usage to help you plan the purchase of supplies. It consists of two parts:

● myPrintMileage website

● myPrintMileage AutoSend. This is a utility that periodically updates your printer usage information to the myPrintMileage website. This will provide you with a closer forecast of your printer usage.

To use the myPrintMileage website and myPrintMileage AutoSend, you must have the following:

● The Toolbox installed.

● An Internet connection.

● The printer connected.

From the myPrintMileage website, you can find the following information about your printer:

● The amount of ink you have used. myPrintMileage forecasts how many ink cartridges you might use in one year.

● Whether you use more black or color ink.

● The average quantity of media used per month, for each media type.

● The number of pages printed, and the estimated number of pages you can print with the remaining amounts of ink.

To access the myPrintMileage website

You can access the myPrintMileage website from the Toolbox (Windows users only) or from the embedded Web server if the printer is connected to an IP-based network.

● **From the Toolbox (Windows only)**

On the Information tab in the Toolbox, click **myPrintMileage**.

● **From the embedded Web server**

In a Web browser, type the IP address assigned to the printer. In the Other Links section of the Information or Settings tab, click **myPrintMileage**.

Note
Do not bookmark Web pages used to display myPrintMileage. If you bookmark this site and connect to it using the bookmark, the pages will not display the current information. Instead, connect to myPrintMileage as described above.

To enable myPrintMileage AutoSend

1   On the Printer Status tab in the Toolbox, click the **Preferences** button.

2   Select the **Enable myPrintMileage AutoSend** check box.

3   Click **OK**.

You can disable the utility at any time through the Toolbox or the myPrintMileage icon on the Windows taskbar.

Using HP Web Jetadmin

HP Web Jetadmin is a Web-based system administration tool that allows remote installation and management of networked peripherals from a Web browser. It enables network administrators to configure network printers individually or in batch mode, manage printer features, and monitor printer status, including levels for printer supplies.

HP Web Jetadmin is available only if the printer is connected to an IP-based network. This browser-based software can be hosted on any of the following platforms:

●   Windows NT 4.0, Windows 2000, or Windows XP Professional

●   Red Hat Linux

●   SuSE Linux

To download HP Web Jetadmin software, go to http://www.hp.com.

5 Maintaining and troubleshooting

Maintaining the printheads

Cleaning the printheads

The printheads for your printer have microscopic nozzles that can clog when exposed to the air for more than a few minutes. The printer is designed to prevent nozzles from drying out when the printer is idle and when it is turned off by pressing ⏻ (power button) on the printer.

A printhead that is not used for long periods of time can also clog, resulting in a noticeable decrease in print quality. To unclog the nozzles, clean the printheads.

Clean the printheads when lines or dots are missing from printed text or graphics.

Note Only clean the printheads when necessary. Cleaning the printheads when defects do not occur in printed text or graphics wastes ink and shortens the life of the printheads.

To clean the printheads

1   Press ✓ (select button) on the control panel.

2   Press ▼ (down arrow button) to highlight MAINTENANCE, and then press ✓ (select button).

3   Press ▼ (down arrow button) to highlight PRINT QUALITY, and then press ✓ (select button).

4   Press ▼ (down arrow button) to highlight CLEAN PRINTHEADS, and then press ✓ (select button).

Note Cleaning the printheads takes several minutes.

When the process is complete, the printer prints two pages with cleaning patterns.

Cleaning the printhead contacts

If lines or dots are still missing from printed text or graphics after you have cleaned the printheads, the printhead contacts might be dirty.

CAUTION   HP recommends that you clean the printhead contacts only *after* you have cleaned the printheads. Printhead contacts contain sensitive electronic components that can be damaged easily.

To clean the printhead contacts

1   Turn the printer on.

2   Lift the top cover and the ink cartridge cover.

3   To open the printhead latch, lift it from the rear, and then pull it forward and down to release the hooks from the metal catch bar.
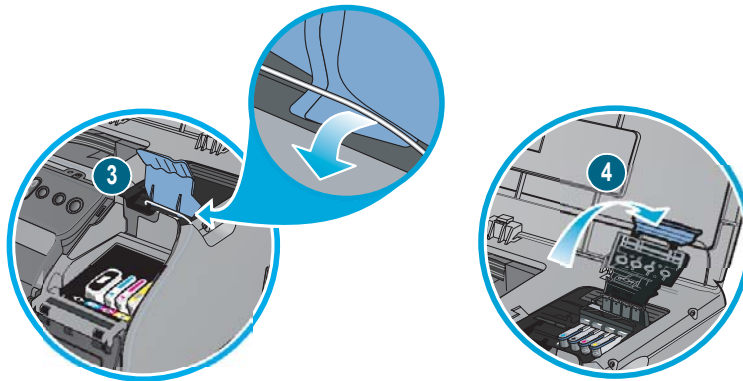
4   Pull the latch up and back to uncover the printheads.

5   To remove a printhead, place your index finger in the loop of printhead's handle, and gently pull up until the printhead releases from the carriage assembly.

6   Using a soft, dry, lint-free cloth, carefully remove any ink from the contact pads on the printhead and inside the printhead slot in the printer.

contact pads
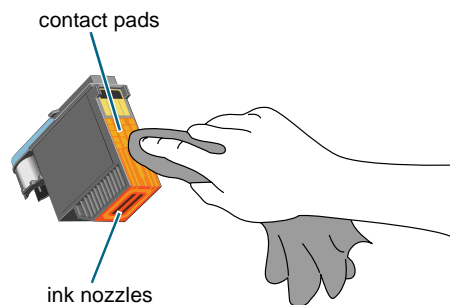
ink nozzles

CAUTION   Do *not* clean the ink nozzles on the bottom of the printhead.

7   Reinsert the printhead into its color-coded slot. Press down firmly on the printhead to ensure proper contact.

8   Repeat steps 5 through 7 for the remaining printheads.

9   Pull the printhead latch all the way forward and down, and engage the metal catch bar with the hooks. Push the latch toward the back of the printer. You might have to apply some pressure to close the latch.

10 Close the top cover and the ink cartridge cover.

Aligning the printheads

The printheads are automatically aligned upon installation. Misaligned printheads produce jagged edges or stray dots on printouts. If your printheads are misaligned, you can align them through the control panel.

To align the printheads

1   Press ✓ (select button) on the control panel.

2   Press ▼ (down arrow button) to highlight `MAINTENANCE`, and then press ✓ (select button).

3   Press ▼ (down arrow button) to highlight `PRINT QUALITY`, and then press ✓ (select button).

4   Press ▼ (down arrow button) to highlight `ALIGN PRINTHEADS`, and then press ✓ (select button).

When the process is complete, the printer prints a page with alignment patterns.

Replacing ink cartridges and printheads

Replacing ink cartridges

Replace ink cartridges when the following messages appear in the control panel:

`REPLACE [COLOR] INK CARTRIDGE`

`[COLOR] INK CARTRIDGE EMPTY`

`[COLOR] INK CARTRIDGE EXPIRED`

`UNKNOWN [COLOR] INK CARTRIDGE`

For installation information, see the instructions included with the ink cartridges.

Note   When replacing ink cartridges, install the new ink cartridges right away. Ink cartridges should not be removed from the printer for long periods of time.

Replacing printheads

Replace printheads when the following messages appear on the control panel:

```
REPLACE [COLOR] PRINTHEAD

INCOMPATIBLE [COLOR] PRINTHEAD
```

To replace printheads

1 Turn the printer on.

2 Lift the top cover and the ink cartridge cover.

3 To open the printhead latch, lift it from the rear, and then pull it forward and down to release the hooks from the metal catch bar.
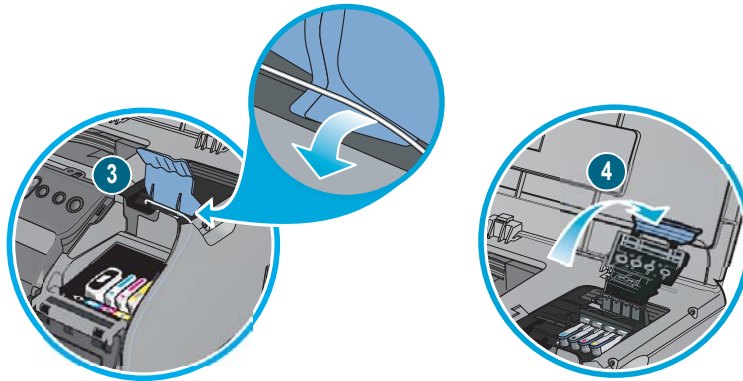
4 Pull the latch up and back to uncover the printheads.

5 To remove a printhead, place your index finger in the loop of the printhead's handle, and gently pull up until the printhead releases from the carriage assembly. Discard the used printhead.

6 Remove the new printhead from its package.

7 Remove the protective tape from the printhead.

8 Insert the new printhead into its color-coded slot.

9 Press down firmly on the printhead to ensure proper contact after installation.

10 Pull the latch all the way forward and down, and engage the metal catch bar with the hooks. Push the latch toward the back of the printer. You might have to apply some pressure to close the latch.

11 Close the top cover and the ink cartridge cover.

12 Wait while the printer aligns the printheads. This can take a few minutes. When the process is complete, an alignment page prints.

Calibrating color

The printer automatically calibrates color when a printhead or ink cartridge is changed.

Whenever you experience color-related problems with the printer, calibrate the color before trying any other steps.

To calibrate color using the control panel

1   Press ✓ (select button) on the control panel.

2   Press ▼ (down arrow button) to highlight MAINTENANCE, and then press ✓ (select button).

3   Press ▼ (down arrow button) to highlight PRINT QUALITY, and then press ✓ (select button).

4   Press ▼ (down arrow button) to highlight COLOR CALIBRATION, and then press ✓ (select button).

    A calibration page (with instructions) prints and the following message appears on the control panel:

    SELECT COLOR PATCH
    NUMBER

5   Press ✓ (select button).

6   On the calibration page, find the box that matches the background color, and note its number.

7   On the control panel, press ▲ (up arrow button) or ▼ (down arrow button) to highlight the number of the box, then press ✓ (select button).

Calibrating linefeed

If regular horizontal bands appear in printed text or graphics, calibrate the linefeed using the following procedure.

To calibrate linefeed

1   Press ✓ (select button) on the control panel.

2   Press ▼ (down arrow button) to highlight MAINTENANCE, and then press ✓ (select button).

3   Press ▼ (down arrow button) to highlight PRINT QUALITY, and then press ✓ (select button).

4   Press ▼ (down arrow button) to highlight LINEFEED CALIBRATION, and then press ✓ (select button).

    A calibration page (with instructions) prints and the following message appears on the control panel:

    FEWEST LIGHT/DARK LINES

5   Press ✓ (select button).

6   On the calibration page, find the box that has the fewest horizontal bands across it, and note its number.

7   On the control panel, press ▲ (up arrow button) or ▼ (down arrow button) to highlight the number of the box, then press ✓ (select button).

General troubleshooting tips

If you have problems with the printer or have trouble printing, try the following troubleshooting tips to help diagnose and solve the problems:

● Print a Configuration page, which can help diagnose printer problems. See "Printing a Configuration page."

● Check for problems by using the printer's embedded Web server (if the printer is connected to a network). For more information, see "Using the embedded Web server."

● On the Starter CD, see the readme file or release notes for late-breaking information and troubleshooting tips. For the latest information, visit the product support site at http://www.hp.com/support/businessinkjet2300.

● Complete the "Quick checkup" steps.

Quick checkup

The following steps can help you diagnose and solve printer problems.

Step 1: Check the power

Make sure the power cord is connected firmly to the printer and to a working power outlet. Make sure the printer is turned on.

Step 2: Check the print media

Make sure media is loaded correctly in the tray and that media is not jammed in the printer.

For information about loading media, see "Loading print media." For information about clearing and preventing jams, see "Clearing media jams."

Step 3: Check the control panel and Attention light

When there is an error, the Attention light flashes. The printer displays two general types of error messages:

Error message type	Example	Solution
Messages showing common printer errors	REPLACE [COLOR] CARTRIDGE	See "Control panel messages."
Messages showing error codes and short descriptions of the errors	XXXX.XXXX [DESCRIPTION] : [ACTION]	Press ⏻ (power button) to turn off the printer, wait a few seconds, and then turn it on again. In most situations, this action solves the problem. If the message persists, your printer might need service. Write down the error code, and then go to HP Instant Support to learn more about possible causes for the message. See "HP Instant Support."

Step 4: Check the ink cartridges and printheads

Make sure all four ink cartridges and printheads are properly installed and that the protective tape covering the ink nozzles on each printhead has been removed. Make sure the ink cartridges are not empty.

For information about maintaining ink cartridges and printheads, see "Replacing ink cartridges and printheads" and "Maintaining the printheads."

Step 5: Check the printer setup

Make sure the printer is selected as the current or default printer. If your computer is running Windows, make sure that **Pause Printing** is not selected.

1 Do one of the following:

- *Windows 98, Windows Me, Windows NT 4.0, and Windows 2000:*
  Click **Start**, point to **Settings**, and then click **Printers**.

- *Windows XP:*
  Click **Start**, and then click **Printers and Faxes**.
  Or, click **Start**, click **Control Panel**, and then click **Printers and Faxes**.

2 Right-click the printer icon, and make sure a check mark does not appear next to **Pause Printing**.

For more information about checking the printer setup, see the online Help for your computer's operating system.

For Mac OS, do one of the following:

- *Mac OS X (10.1):* Make sure the **Status** column does not show **Stop**.

- *Mac OS X (10.2):* Double-click the printer in the printer list, then make sure the icon shows **Stop Jobs**.

Step 6: Check the print settings

Make sure the print settings (such as media type, media size, margins, and color) in the printer driver are correct. Also, check the settings in the **Page Setup** dialog box (typically available by selecting **Page Setup** from the **File** menu in a software application).

Step 7: Check the USB or parallel port on your computer (if applicable)

Make sure your printer is connected directly to the USB port or parallel port. Do not share the port with other devices, such as a Zip drive.

Step 8: Check the network setup (if applicable)

Make sure that your printer is properly set up in the network environment. Print a Jetdirect Configuration page to verify the network settings. For more information, see "Printing a Configuration page."

If you are able to communicate with the printer over the network, you can use the printer's embedded Web server to check the network setup. For more information, see "Using the embedded Web server."

For information about setting up and using the printer on a network, see the *HP Jetdirect Administrator's Guide* on the Starter CD.

Printing a Configuration page

The Configuration page shows the following information:

Item	Description
1	**Printer Information**: Shows general printer information, such as firmware version number, model name, and memory installed.
2	**Printhead Information**: Shows printhead health status and whether the printhead needs to be replaced.
3	**Ink Cartridge Information**: Shows estimated ink levels (represented in graphical form as gauges).
4	**Event Log**: Shows a log of recent events that occurred.

If an HP Jetdirect printer server is installed in the printer, an additional Jetdirect Configuration page prints. This page shows the network settings for the print server.

To print a Configuration page

1 Press ✓ (select button) on the control panel.

2 Press ▼ (down arrow button) to highlight INFORMATION, and then press ✓ (select button).

3 Press ▼ (down arrow button) to highlight PRINT CONFIGURATION PAGE, and then press ✓ (select button) to print the Configuration page.

Note If an HP Jetdirect print server is installed, two pages print. If the auto-duplex unit is installed and the duplex option is set to ON in the control panel, do not remove the page from the printer until both sides are finished printing.

Solving printer problems

The printer is not responding

- **Check the control panel for error messages**

  For a list of printer error messages, see "Control panel messages."

- **Check the printer setup**

  Check the following items:

  - Make sure the ink cartridges, printheads, and print media are loaded correctly. Also make sure that the printer cable is firmly connected from the printer to your computer and that the power cord is connected from your printer to the power outlet.

  - If you are using a parallel interface connection, ensure that the correct port (LPTx, where "x" is the port number) is selected and that the printer is connected directly to your computer. If your printer is connected to a switch box, make sure that you have selected the correct switch. Or, connect the printer directly to the computer without the switch box.

  - Make sure the printer is selected as the current or default printer. For information about setting the default printer, see the online Help for your computer's operating system.

- **Check the power**

  If the printer is not turned on, press ⏻ (power button) on the printer. After a brief printer startup, you should see a steady green light (the Ready light) on the control panel.

Note   If you tried to print when the printer was turned off, an alert message should have appeared on your computer. If the printer was off and you did not see a message when you tried to print, the printer setup might be incorrect. Uninstall the printer software by running the uninstaller program in the printer's program group (Windows), or by selecting the uninstall option in the Installer (Mac OS). Then reinstall the software that came with your printer.

The Attention light flashes

This indicates an event that requires user intervention or an error has occurred. For example, a printer cover might not be closed properly, or the carriage might be jammed.

- Check the control panel

  If the message shows a printer error, see "Control panel messages." Follow the recommended actions to resolve the error.

- Restart the printer

  If the control panel displays the message `XXXX.XXXX [DESCRIPTION] : [ACTION]`, try restarting the printer. Press ⏻ (power button) to turn off the printer. Wait a few seconds, and then turn it on again. In most situations, this action solves the problem. If the message persists, your printer might need service. Write down the error code, and then go to HP Instant Support to learn more about possible causes for the message. See "HP Instant Support" for more information.

The Attention light flashes alternately with the Ready light

This indicates a critical error has occurred, and the printer requires attention. A critical-error message usually accompanies this indicator.

Some of these messages can be cleared by restarting the printer. Press ⏻ (power button) to turn off the printer. Wait a few seconds, and then turn it on again. If a critical error persists, service is required.

The printer shuts down unexpectedly

Make sure the power cord is connected firmly to the printer and to a working power outlet, and that the printer is turned on. The Ready light on the control panel should be green. Try turning the printer off, by pressing ⏻ (power button), and then turn it on again.

Nothing is printed

- **Be patient**

  Complex documents that contain many fonts, graphics, and color photos take longer to begin printing. The control panel displays the message PROCESSING JOB and the Ready light blinks when the printer is processing information to be printed.

- **Check the power**

  Make sure the power cord is connected firmly to the printer and to a working power outlet, and that the printer is turned on. The Ready light on the control panel should be green. Try turning the printer off, by pressing ⏻ (power button), and then turn it on again.

- **Check the interface cable**

  Make sure the interface cable (USB, parallel, or network) is connected properly.

- **Check the print media**

  Make sure media is loaded correctly in the tray and that the print media is not jammed in the printer. For more information about loading media, see "Loading print media."

- **Try printing a Demo page**

  1 Press ✓ (select button) on the control panel.

  2 Press ▼ (down arrow button) to highlight INFORMATION, and then press ✓ (select button).

  3 Press ▼ (down arrow button) to highlight PRINT DEMO, and then press ✓ (select button) to print the Demo page.

- **Check the printer setup**

  Make sure the printer is selected as the current or default printer. For information about setting the default printer, see the online Help for your computer's operating system.

  Also, if your computer is running Windows, make sure that **Pause Printing** is not selected.

  1 Do one of the following:

  - *Windows 98, Windows Me, Windows NT 4.0, and Windows 2000:*
    Click **Start**, point to **Settings**, and then click **Printers**.
  - *Windows XP:*
    Click **Start**, and then click **Printers and Faxes**.
    Or, click **Start**, click **Control Panel**, and then click **Printers and Faxes**.

  2 Right-click the icon for the printer, and then make sure that **Pause Printing** is not selected.

- **Conflicting print settings are selected**

  An error message appears when the print features selected are incompatible. For example, when the Paper Type selected is **hp premium photo paper** and Print on Both Sides is set to **On**. You cannot print on both sides of this type of paper. Change either of the print settings shown in the message. For example, you can print on both sides of **Plain Paper**.

- **The print to file option is selected in the printer driver**

  If **Print to File** is selected in the printer driver, the print job is saved to a file on your computer and not printed on paper.

  - *Windows:* From the software application, on the **File** menu, click **Print**. Make sure the **Print to File** option is not selected.
  - *Mac OS:* On the main pop-up menu in the **Print** dialog box, make sure the **Print to file** option is not selected.

- **Check the network setup**

  Make sure that your printer is properly set up in the network environment. For information about setting up and using the printer on a network, see the *HP Jetdirect Administrator's Guide* on the Starter CD.

Printer takes a long time to print a job

- **Check your system configuration**

  Make sure your computer meets the system requirements (see "Printer specifications"). Although the printer is designed to function with a computer that meets the minimum system requirements, printer performance is optimized with a computer that meets the recommended system requirements.

- **Make sure the computer has sufficient hard disk space**

  If you are printing graphics-intensive files, make sure you have enough hard disk space.

- **Make sure the port setting configuration in the computer is set to ECP (Windows 98 only)**

  See the computer's manual for information on how to change your port setting, or contact your computer manufacturer.

- **Make sure the computer has enough resources available (Windows only)**

  If less than 80 percent of the computer resources are available, printing could be significantly slower.

  To make more computer resources available, close all unused applications and resend your print job. If necessary, restart your system, and then resend your print job.

Solving printing problems

A blank page is printed

- **Check the control panel for error messages**

  For a list of error messages, see "Control panel messages."

- **Check the printheads for tape**

  Make sure you have removed the protective tape from the ink nozzles of each printhead.

- **Check the printer setup**

  Make sure your printer is selected as the current or default printer. For information about setting the default printer, see the online Help for your computer's operating system.

- **Check the USB or parallel port on your computer**

  Make sure your printer is connected directly to the USB port or parallel port. Do not share the port with other devices, such as a Zip drive.

Printer does not print on both sides of the media

- **The duplex option was not selected in the printer driver**

  Make sure the duplex option is selected. For instructions on setting print options, see "Changing printer settings".

- **The media type or size is not supported by the auto-duplex unit**

  You cannot print on both sides of media such as transparencies and envelopes. For more information on the media that can be used, see "Supported media sizes" and "Supported media types and weights".

Placement of the text or graphics is wrong

- **Make sure the media size or orientation settings are correct**

  Make sure the media size and page orientation selected in the software application match the settings in the printer driver.

- **Make sure the media is loaded correctly**

  If everything on the page is slanted or skewed, check the following:

  - Make sure the media width and length guides fit snugly but gently against the edges of the stack.
  - For Tray 1, make sure that no more than 150 sheets of media (up to 15 mm or 0.6 inch, stacked) are loaded in the tray. Tray 1 can hold a maximum of 30 transparencies.
  - For Tray 2, make sure that no more than 250 sheets of plain paper (up to 25 mm or 1 inch, stacked) are loaded in the tray. Tray 2 of the HP Business Inkjet 2300dtn can hold up to 500 sheets of plain paper (up to 50 mm or 2 inches, stacked).

  For more information about loading media, see "Loading print media."

- **Make sure the margin settings are correct**

  If the text or graphics are cut off at the edges of the page, make sure the margin settings for the document match or exceed the minimum margins for the printer. For more information, see "Minimum margins."

Text or graphics are cut off at the edges of a page

- **Make sure the orientation settings are correct**

  The page orientation selected might not be correct for the document you are printing. See "Changing printer settings" for instructions about changing print settings.

- **Make sure the margin settings are correct**

  If the text or graphics are cut off at the edges of the page, make sure the margin settings for the document match or exceed the minimum margins for the printer. For more information, see "Minimum margins."

- **Make sure the content fits on the page**

  The size of the document you are printing may be larger than the media size in the tray.

  Check if the layout of the document you are trying to print will fit on a media size supported by the printer, and then load the correct media size. Make sure to select the correct page orientation.

- **Make sure the media is loaded correctly**

  Make sure the media width and length guides fit snugly but gently against the edges of the stack. Also, make sure that the correct page orientation is selected.

  For more information about loading media, see "Loading print media." For more information about changing print settings, see "Changing printer settings."

- **Make sure the media meets the specifications**

  Some media types are not suitable for use with your printer, and may not feed properly into the printer. For more information about supported media types, see "Selecting print media".

- **The software application cannot interpret print settings properly**

  On the Starter CD, see the readme file for known software conflicts. Otherwise, check your software application manual, or contact the software manufacturer for more specific help for this problem.

The wrong fonts are printed

- **Make sure that fonts are used correctly in the document**

  Make sure you correctly apply the font you want to use. For example, in a graphics application, place the words in the desired size; do not enlarge by dragging and sizing.

- **Make sure the font is available in your computer**

  The fonts used in the document might not match the fonts currently available in your computer or the type of font used is not designed to be printed. Make sure the font is available in the font selection box of your software application, and make sure it is a TrueType™ font.

  TrueType is a technology that can create fonts of any size from a basic font outline. TrueType fonts are scalable. They can be scaled at any time for use on the computer screen or the printer. This is the standard font-scaling technology in Windows.

- **The wrong printer driver is selected**

  Make sure your printer is selected as the current or default printer. For information about setting the default printer, see the online Help for your computer's operating system.

- **The software application is conflicting with the printer**

  On the Starter CD, see the readme file for a list of known conflicts with popular software applications, or contact the software manufacturer for help.

Text is jagged at the edges

● **Make sure the correct type of font has been chosen**

Some software applications offer custom fonts or use bitmap images of text that have jagged edges when skewed, enlarged, or printed. By using TrueType fonts, you can ensure that the printer is able to print smooth fonts. When selecting a font, look for the TrueType icon.

● **An incorrect media type is being used**

This printer is designed to work well with most office paper types or quality 25 percent cotton bond paper. Because the printer uses ink to produce an image, media that accepts ink well produces the best results. Media that is heavily textured or does not accept ink well can cause graphics and text to print poorly.

To determine if the media type is the cause of the problem, try printing the same document on a type of media that has previously worked well with your printer. For more information about supported media types, see "Selecting print media".

● **The software application is conflicting with the printer**

On the Starter CD, see the readme file for a list of known conflicts with popular software applications, or contact the software manufacturer for help.

The printout is incorrect or part of it is missing

● **Make sure the margin settings are correct**

Make sure the margin settings for the document match or exceed the minimum margins for the printer. For more information, see "Minimum margins."

● **Color print settings might be wrong**

The printer may be set to print in black and white or grayscale. Follow the instructions for your operating system to check the setting.

• *Windows:* From the software application, on the **File** menu, click **Print**, and then click **Setup** or **Properties**. Make sure the **Grayscale** option is not selected.

• *Mac OS 9 (9.1 and later):* On the main pop-up menu in the **Print** dialog box, select **Color Matching**. Make sure the **Black and White** or **Grayscale** options are not selected on the **Print Color** pop-up menu.

• *Mac OS X (10.1 and later):* On the main pop-up menu in the **Print** dialog box, select **HP Image Quality**. Make sure the **Print Color as Gray** option is not selected.

● **The wrong printer driver is selected**

Make sure your printer is selected as the current or default printer. For information about setting the default printer, see the online Help for your computer's operating system.

Meaningless characters are printed

● **A cable connection is poor**

A common cause for nonsense characters is a poor cable connection between the printer and computer.

Make sure the cable connection at both ends is good and that the cable is securely fastened.

● **The system needs to be restarted**

Turn off the computer. Press ⏻ (power button) to turn off the printer. Wait for a few seconds and turn them both back on. Try printing again.

- **The wrong printer driver is selected**

  Make sure your printer is selected as the current or default printer. For information about setting the default printer, see the online Help for your computer's operating system.

- **The document file is damaged**

  Occasionally, a document file can become damaged. If you can print other documents from the same software application, try to print using a backup copy of your document, if available.

Printout is slanted or skewed

If media is twisting as it feeds or margins appear crooked, the media guides might not be correctly positioned against the stack. Both the media length and width guides must fit snugly but gently against the stack.

Ink is smearing

- **The printout did not have time to dry**

  When printing documents that use a lot of ink, you must allow the document more time to dry before handling it. This is especially true for transparencies.

  The printer driver's **Normal** print quality setting is to designed to optimize both drying time and speed. This mode allows the print output to dry completely in most situations. However, when printing in very humid environments, use the **Best** print quality setting to allow a longer drying time.

- **The media type is causing the smearing**

  Some types of media do not accept ink well, which causes the ink to dry more slowly and results in smearing. See "Selecting print media" for more information about media.

- **An incorrect media type is selected**

  The correct media must be selected in the printer driver. Make sure the media selected in the printer driver matches the media loaded in the tray.

- **The media has been exposed to a humid environment**

  If media has been exposed to a humid environment, it might be difficult to achieve the correct drying time, especially when printing with heavy color saturation. Print on a fresh ream of media that has been stored in a cool, dry place.

- **Too much ink on the page is causing wrinkling**

  Color documents with rich, blended colors can use excess ink, which wrinkles the page during printing and causes smearing. Try using the **Normal** or **Fast** print quality setting to reduce ink, or use HP media designed for printing vivid color documents.

Ink is not filling the text or graphics completely

- **The printheads have poor contact**

  Remove and then reinstall the printheads. See "Replacing printheads."

- **The printheads need cleaning**

  Whenever print quality decreases noticeably, it is a good idea to clean the printheads. For instructions on cleaning the printheads, see "Cleaning the printheads."

Note   Printhead condition and media type are important factors in print quality. For more information, see "Maintaining the printheads."

- **The printheads need to be replaced**

  If the printheads are several years old, they might need to be replaced. For printhead health information, print a Configuration page. To replace the printheads, see "Replacing printheads."

- **An incorrect media type is being used**

  Some media types are not suitable for use with your printer. See "Selecting print media."

- **The wrong print quality setting is selected**

  Try to print using the **Best** print quality setting.

If these procedures do not help, see "HP telephone support" for information about contacting HP support.

Regular horizontal bands appear in the text or graphics

- **The printer needs to be calibrated**

  Perform the calibration as described in "Calibrating linefeed."

Solving color problems

Whenever you experience color-related problems with the printer, calibrate the color before trying any other steps. For more information, see "Calibrating color."

Printouts appear faded or dull

- **Fast print quality is selected**

  The **Fast** print quality setting allows you to print at a faster rate and is good for printing drafts. To achieve better colored printout, select the **Normal** or **Best** print quality setting in the printer driver.

- **An incorrect media type print setting is selected**

  When printing on transparencies or other special media types, select the corresponding media type in the printer driver.

- **An incorrect media type is being used**

  Some media types are not suitable for use with your printer. See "Selecting print media."

Colors are printing as black and white

- **The grayscale printing option is selected**

  The grayscale printing option is probably selected in the printer driver. Follow the instructions for your operating system to check the setting.

  - *Windows:* From the software application, on the **File** menu, click **Print**, and then click **Setup** or **Properties**. Make sure the **Grayscale** option is not selected.

  - *Mac OS 9 (9.1 and later):* On the main pop-up menu in the **Print** dialog box, select **Color Matching**. Make sure the **Black and White** or **Grayscale** options are not selected on the **Print Color** pop-up menu.

  - *Mac OS X (10.1 and later):* On the main pop-up menu in the **Print** dialog box, select **HP Image Quality**. Make sure the **Print Color as Gray** option is not selected.

- **The wrong printer driver is selected in the software application**

  Make sure the correct printer driver is selected in the application.

- **The printer is not configured correctly**

  Print a Configuration page. If no color appears on the Configuration page, contact HP support. For instructions on printing a Configuration page, see "Printing a Configuration page." See "HP telephone support" for information about contacting HP support.

Colors on the printout do not match colors as they appear on the screen

- **The wrong printer driver is selected**

  Make sure the correct printer driver is selected in the software application.

- **The software application is interpreting colors incorrectly**

  If extremely light or extremely dark colors are not printing correctly, the application could be interpreting these colors as white or black. Avoid using extremely light or dark colors, or use a different software application.

- **An incorrect media type is being used**

  Some media types are not suitable for use with your printer. See "Selecting print media."

Bleeding colors are apparent in printout

- **The wrong media type setting is selected**

  Some media type settings (such as a transparency setting) and print quality settings (such as **Best**) require more ink than others. Choose different print settings in the printer driver. Also, make sure that you have selected the correct media type in the printer driver.

- **An incorrect media type is being used**

  Some media types are not suitable for use with your printer. See "Selecting print media."

- **The ink cartridges have been refilled**

  HP does not guarantee or support refilled ink cartridges. Refilling processes and the use of incompatible inks might disrupt the intricate printing system, potentially resulting in reduced print quality and even printer damage.

  To order new ink cartridges, see "Supplies" or the reorder number on the original HP ink cartridges.

Color prints inconsistently after installing a new ink cartridge

- **The ink cartridges have poor contact**

  Try removing and then reinstalling the ink cartridges, making sure that they snap firmly into place.

- **The printheads are clogged and need to be cleaned**

  For instructions on cleaning the printheads, see "Cleaning the printheads."

Colors do not line up properly with each other

- **The printheads need to be aligned**

  The printheads on your printer are automatically aligned when a printhead is replaced. However, you might notice print quality improvement by performing the alignment procedure.

  To align the printheads, see "Aligning the printheads."

- **Graphics in the document are not placed properly**

  Use the zoom or print preview feature of your software application to check for gaps in the placement of graphics on the page.

Solving media-handling problems

Media feed problems

- **Print media is jammed in the printer**

  Check for jams.

  See "Clearing media jams" for instructions on clearing a jam.

- **Printer feeds multiple sheets**

  Make sure that only one type of media is loaded in each tray. Some media types are not suitable for use with your printer. See "Selecting print media."

- **Media is not loaded correctly**

  Make sure the media width and length guides fit snugly but gently against the edges of the stack. Also, make sure that the correct page orientation is selected.

  For instructions on loading media, see "Loading print media". For instructions on changing print settings, see "Changing printer settings".

- **An incorrect media type is being used**

  Some media types are not suitable for use with your printer. See "Selecting print media."

- **Trays or other components are not inserted properly**

  Check that all trays and covers are completely closed. Make sure the optional auto-duplex unit is installed properly.

  For instructions on installing the optional auto-duplex unit, see "Installing an auto-duplex unit".

Tray cannot be inserted

Something in the printer is blocking the tray

Check the slot where the tray fits to ensure that nothing is broken or jammed that would prevent the tray from being inserted.

If the tray will not close completely when it is inserted, pull out the tray and then push it in again firmly.

Media is not picked up from a tray

- **The media loaded in a tray is not the same as the media size or type selected in the printer driver or configured in the control panel**

  In case of a media mismatch, the control panel displays the message LOAD [TYPE] [SIZE] IN TRAY X. Do the following:

  1 Load the correct media in the tray and make sure the media width and length guides fit snugly but gently against the stack.

  2 Press ⟳ (resume button) to print.

  To avoid a media mismatch, find out which tray contains the media on which you want to print, make sure the media size and type are set correctly in the control panel, and then select that tray in the printer driver.

- **The tray's media size or type settings configured in the control panel do not match the size or type selected in the printer driver**

  In case of a media mismatch, the control panel displays the message `LOAD [TYPE] [SIZE] IN TRAY X`. Do the following:

  1 Load the correct media in the tray and make sure the media width and length guides fit snugly but gently against the stack.

  2 Check that the media size and type are set correctly in the control panel. (Media sizes and types are set in the Paper Handling menu.)

  3 Press ⬇ (resume button) to print.

- **An incorrect media type is being used**

  Some media types are not suitable for use with your printer. See "Selecting print media."

- **The media width guide is pressed too tightly against the stack**

  Check that the media width guide is pressed snugly but gently against the stack.

- **The media stack exceeds the maximum stack height for the tray**

  Check the label inside the tray for the maximum stack height. If the media exceeds this level, remove some of the media from the tray.

- **Media is curled**

  Make sure the media you are using is not curled. Uncurl the media by gently bending it in the opposite direction of the curl.

  If media has been exposed to a humid environment, it might curl. Media should be stored in a cool, dry place.

- **The media lift plate inside the tray is stuck in the lowest position**

  Pull out the tray, and then push it in again firmly.

  If the media still is not picked up from the tray, open the tray and reposition the media. Make sure the media width and length guides fit snugly but gently against the stack. Firmly close the tray.

Media output problem

- **Pages are falling off the printer**

  Make sure the output tray extension is fully extended.

  The output tray holds up to 100 sheets of plain paper, depending on how much the media curls and how much ink is used on each page. Remove excess media from the output tray.

Clearing media jams

If the print media is jammed in the printer, follow the instructions below to clear the jam. For more information on how to avoid media jams, see "Tips for avoiding jams."

1   Remove all media from the output tray.

2   Check the optional auto-duplex unit or rear access panel.

    a   Push the button on either side of the auto-duplex unit or rear access panel and remove it.

    b   If you locate the jammed media inside the printer, grasp the media with both hands and pull it toward you.
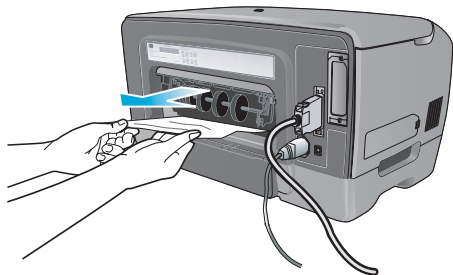
    c   If the jam is not there, push the latch on the top of the auto-duplex unit (if you have one) and lower its cover. If the jammed media is inside, carefully remove it. Close the cover.
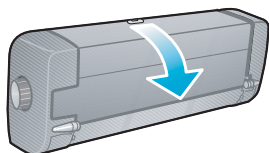
    d   Reinsert the auto-duplex unit or rear access panel into the printer.

    e   If you cannot locate the jam, go to step 3.

3   Lift the output tray and check for a jam in Tray 1.

    a   If the media is jammed in Tray 1, pull out Tray 1. (Otherwise, go to step 4.)

    b   Pull the paper toward you as shown in the diagram.

    c   Lower the output tray and reposition Tray 1.

4   If you have not yet found the jam, check Tray 2. (Otherwise, go to step 5.)

    a   Pull out Tray 2. If you see the jammed media, remove it from Tray 2.

    b   If you cannot locate the jammed media by removing Tray 2 from the printer, turn off the printer (if you have not already done so), and then remove the power cord.

    c Lift the printer off Tray 2.

    d Remove the jammed media from the bottom of the printer or from Tray 2.

    e Reposition the printer on top of Tray 2.

5 Open the top cover and check inside the printer for any remaining media. If there is media inside the printer, follow the steps below. (Otherwise, go to step 6.)

    a When you lift the top cover, the carriage should return to the right side of the printer. If the carriage does not return to the right side, turn the printer off.

WARNING!   Do not reach into the printer when the printer is on and the carriage is stuck.

    b Free the media and pull it toward you through the top of the printer.

6 After you clear the jam, close all covers, turn on the printer (if you turned it off), and then press ⬇ (resume button) to continue the print job.

The printer will continue the print job on the next page. You will need to resend the page or pages that were jammed in the printer.

Tips for avoiding jams

If media repeatedly jams in the printer, follow these tips to avoid media jams.

- Make sure the printhead latch is properly engaged.

- Make sure nothing is blocking the paper path.

- Do not overload the trays. Tray 1 holds up to 150 sheets of paper and Tray 2 holds up to 250 sheets. For the HP Business Inkjet 2300dtn, Tray 2 holds up to 500 sheets. Be sure the media does not exceed the maximum stack height as indicated on the label in the tray.

- Load media properly. For more information, see "Loading print media."

- Make sure the media width and length guides fit snugly but gently against the stack of media, but do not wrinkle or bend the media.

- Always use media that conforms with the specifications in "Selecting print media."

- Do not use media that is damaged, curled, or wrinkled. Do not use media with cutouts or perforations or media that is heavily textured or embossed.

- Avoid media that is too thin, has a slick texture, or "stretches" easily. Such media does not feed properly through the printer.

Troubleshooting installation issues

If you had trouble installing the printer, check these items.

Hardware installation issues

- Make sure the power supply cord is connected securely to the printer. Make sure that the power cord is connect securely between the power supply and a working power outlet.

- Make sure that all packing tape has been removed from outside and inside the printer.

- Make sure the printheads and ink cartridges are installed properly. The printer cannot work if they are not installed.

  - Make sure that you have removed the tape from the printheads.
  - Make sure that all of the printheads are in their correct, color-coded slot.
  - Make sure that all of the ink cartridges are in their correct, color-coded slot.
  - Make sure that all of the printheads and ink cartridges are firmly installed into their slots. Press down firmly on each one to ensure proper contact.

- If the control panel shows a printhead error message, clean the contacts on the printheads. See "Cleaning the printhead contacts."

- Make sure that the printhead latch is closed properly.

- Make sure that the printer is loaded with paper.

- Make sure no lights are on or blinking except the Ready light, which should be on. If the Attention light is flashing, check for error messages on the control panel.

- Make sure that the printer can print a Configuration page.

- Make sure that any printer cable you are using is in good working order and that it is securely connected between the appropriate connector on the printer and the computer or a network connection.

Software installation issues

- Make sure your computer is running one of these operating systems: Windows 98, Windows NT 4.0 (with Service Pack 6), Windows Me, Windows 2000, or Windows XP. If you are using a Macintosh, it must be running Mac OS 9 (9.1 and later) or Mac OS X (10.1 and later).

- Make sure the computer meets at least the minimum system requirements (see "System requirements").

- Before installing software on a Windows computer, make sure that all other applications are closed.

- If the computer does not recognize the path that you type to the CD-ROM drive, make sure you are specifying the correct drive letter.

- If the computer cannot recognize the Starter CD in the CD-ROM drive, inspect the Starter CD for damage. You can download the printer driver from http://www.hp.com/support/businessinkjet2300.

- If your computer is running Windows, it is recommended that you install the printer software first. Connect the USB cable or parallel cable only when prompted by the software.

- When installing the printer software on a Windows computer, you must connect the printer to the computer when prompted, otherwise the software installation cannot be completed. If you need to install the software without connecting the printer, do the following:

  - During installation, when choosing the connector type, select **Other** and then select any port (for example, **COM1**), instead of selecting USB or parallel. Then follow the instructions to complete the software installation without connecting the printer. When installation is complete, a new printer icon is created in the Printers folder for each driver selected.

  - When you connect the printer to a USB or parallel port at a later time, Windows creates another printer icon in the Printers folder. Follow the instructions below to select the correct port for the printer(s) set up earlier. (You can delete the new printer created by Windows.)

  1 From the Windows desktop, do one of the following:

    - *Windows 98, Windows Me, Windows NT 4.0, and Windows 2000:*
      Click **Start**, point to **Settings**, and then click **Printers**.

    - *Windows XP:*
      Click **Start**, and then click **Printers and Faxes**.
      Or, click **Start**, click **Control Panel**, and then click **Printers and Faxes**.

  2 Right-click the printer and click **Properties**, then select the **Ports** tab.

  3 Select the virtual USB port (created by Windows when the printer was connected) or parallel port to which the printer is now connected, and then click **OK**.

  4 To delete the new printer created by Windows, right-click the printer icon and click **Delete**.

6 Ordering HP supplies and accessories

You can order HP supplies and accessories from the HP website at http://www.hpshopping.com.

Accessories

Media handling accessories

Auto-duplex unit

Auto-duplex unit	C8247A

500-sheet Tray 2

500-sheet Tray 2	C8245A

DIMMs

Memory modules

HP 64 MB SDRAM DIMM	Q1887A
HP 128 MB SDRAM DIMM	C9121A

Interface cables

Parallel cables

HP IEEE-1284 A-B Parallel Cable, 2 m (6.6 ft)	C2950A
HP IEEE-1284 A-B Parallel Cable, 3 m (9.8 ft)	C2951A

USB cable

HP USB A-B, 2 m (6.6 ft)	C6518A

Networking accessories

Visit http://www.hp.com for the latest information.

HP print servers

HP Jetdirect 615n (EIO) Internal Print Server Fast Ethernet 10/100Base-TX	J6057A
HP Jetdirect 680n (EIO) Internal Print Server 802.11b Wireless Ethernet	J6058A
HP Jetdirect 610n (EIO) Internal Print Server Token Ring RJ-45, DB9	J4167A
HP Jetdirect 380x External Print Server 802.11b Wireless Ethernet USB	J6061A
HP Jetdirect 175x External Print Server 10/100Base-TX, 1 port (USB)	J6035C
HP Jetdirect 300x External Print Server 10/100Base-TX, 1 port (parallel)	J3263A
HP Jetdirect 310x External Print Server Ethernet 10/100-TX, 1 port (USB)	J6038A
HP Jetdirect 500x External Print Server 10/100Base-TX, 10Base2, 3 ports (parallel)	J3265A
HP Jetdirect 500x External Print Server Token Ring, RJ-45, DB9, 3 ports (parallel)	J3264A
HP Jetdirect 3700 External Print Server 10/100Base-TX, 1 port (USB 2.0)	J7942A
HP Print Server Appliance 4200	J4117A

Supplies

Ink cartridges

HP No. 10 Black ink cartridge, 69 ml	C4844A
HP No. 11 Cyan ink cartridge, 28 ml	C4836A
HP No. 11 Magenta ink cartridge, 28 ml	C4837A
HP No. 11 Yellow ink cartridge, 28 ml	C4838A

Printheads

HP No. 11 Black printhead	C4810A
HP No. 11 Cyan printhead	C4811A
HP No. 11 Magenta printhead	C4812A
HP No. 11 Yellow printhead	C4813A

HP media

HP Bright White Inkjet Paper

500 sheets	Letter (8.5 by 11 inches)	HPB1124
500 sheets	A4 (210 by 297 mm)	C1825A

HP Office Paper

2500 sheets	Letter (8.5 by 11 inches)	25005
10-ream carton	Letter (8.5 by 11 inches)	C8511
10-ream carton (3-hole punched)	Letter (8.5 by 11 inches)	C3HP
10-ream carton	Legal (8.5 by 14 inches)	C8514

HP Office Recycled Paper

500 sheets	Letter (8.5 by 11 inches)	E1120
500 sheets (3-hole punched)	Letter (8.5 by 11 inches)	E113H
500 sheets	Letter (8.5 by 11 inches)	E1420

HP Multipurpose Paper

5-ream carton	Letter (8.5 by 11 inches)	M115R
250 sheets	Letter (8.5 by 11 inches)	25011
500 sheets	Letter (8.5 by 11 inches)	M1120
500 sheets (3-hole punched)	Letter (8.5 by 11 inches)	M113H
500 sheets	Legal (8.5 by 14 inches)	M1420

HP Printing Paper

500 sheets	Letter (8.5 by 11 inches)	P1122

HP Premium Plus Photo Paper

20 sheets, glossy	Letter (8.5 by 11 inches)	C6831A
50 sheets, glossy	Letter (8.5 by 11 inches)	Q1785A
20 sheets, glossy	4 by 6 inches	Q1977A
20 sheets, matte	Letter (8.5 by 11 inches)	C6950A
20 sheets, glossy	A4 (210 by 297 mm)	C6832A
20 sheets, matte	A4 (210 by 297 mm)	C6951A

HP Premium Photo Paper

50 sheets, glossy	Letter (8.5 by 11 inches)	C6979A
15 sheets, glossy	A4 (210 by 297 mm)	Q2519A

HP Photo Paper

20 sheets, two-sided glossy	Letter (8.5 by 11 inches)	C1846A
20 sheets, two-sided glossy	A4 (210 by 297 mm)	C1847A
20 sheets, one-sided glossy	A4 (210 by 297 mm)	C6765A

HP Colorfast Photo Paper

20 sheets, glossy	Letter (8.5 by 11 inches)	C7013A
20 sheets, glossy	A4 (210 by 297 mm)	C7014A

HP Everyday Photo Paper

100 sheets, two-sided, matte	Letter (8.5 by 11 inches)	C7007A
25 sheets, two-sided, matte	Letter (8.5 by 11 inches)	C6983A
25 sheets, two-sided, semi-gloss	A4 (210 by 297 mm) (Asia/Pacific)	C7006A

HP Brochure and Flyer Paper

50 sheets, two-sided, glossy	Letter (8.5 by 11 inches)	C6817A
50 sheets, matte	Letter (8.5 by 11 inches)	C6955A
100 sheets, tri-fold, two-sided, glossy	Letter (8.5 by 11 inches)	C7020A
50 sheets, two-sided, glossy	A4 (210 by 297 mm)	C6818A

HP Premium Paper

200 sheets	Letter (8.5 by 11 inches)	51634Y

HP Premium Inkjet Paper

200 sheets, coated, matte	A4 (210 by 297 mm)	51634Z
100 sheets, coated, heavyweight	A4 (210 by 297 mm)	C1853A

HP Premium Inkjet Transparency Film

20 sheets	Letter (8.5 by 11 inches)	C3828A
50 sheets	Letter (8.5 by 11 inches)	C3834A
20 sheets	A4 (210 by 297 mm)	C3832A
50 sheets	A4 (210 by 297 mm)	C3835A

HP Premium Plus Inkjet Transparency Film

20 sheets	Letter (8.5 by 11 inches)	C7030A
50 sheets	Letter (8.5 by 11 inches)	C7028A

7 Support and warranty

Contacting customer support

If your printer is not operating properly and the troubleshooting suggestions in this guide do not solve the problem, try using one of the following support services to obtain assistance.

HP help on the Web

Visit http://www.hp.com/support/businessinkjet2300 to find information for your printer. You will be able to view information about setting up and using your printer, downloading printer drivers, solving a problem, ordering supplies and accessories, and viewing the printer warranty.

HP Instant Support

HP Instant Support provides you with product-specific services, troubleshooting tips, and information about your printer's ink and media usage.

You can use HP Instant Support from the Toolbox (Windows users only) or embedded Web server if the printer is connected to an IP-based network.

- **From the Toolbox (Windows only)**

  On the **Information** tab in the Toolbox, click **HP Instant Support**. Follow the instructions to display the current HP Instant Support information for your printer.

- **From the embedded Web server**

  In a Web browser, type the IP address assigned to the printer. In the Other Links section of Information or Settings tab, click **HP Instant Support**.

Note   Do not bookmark Web pages used to display HP Instant Support. If you bookmark this site and connect to it using the bookmark, the pages will not display the current information. Instead, connect from the embedded Web server or from the Toolbox.

HP telephone support

During the warranty period, you can obtain assistance at no charge from the HP Customer Care Center.

Customer support representatives can answer your questions regarding the setup, configuration, installation, and operation of your printer. They can also help troubleshoot and diagnose printer problems and give instructions for service and repair.

Current telephone support numbers are listed on the HP customer support guide, which is included in your printer box.

Before you call

Before you call, have the following information available to give to the representative:

1   Print a Configuration page. See "Printing a Configuration page" for information on how to print this page.

2   If your printer does not print, get the following information ready:
    - What is the serial number of your printer? (Check the back of the printer.)
    - What model printer do you have? (HP Business Inkjet 2300, 2300n, or 2300dtn.)

3   What operating system is your computer running?

4   Which printer driver are you using (PCL 5c, PCL 6, or PostScript emulation) and what is the version number?

5   How is the printer connected to the system (USB, parallel, or network)?

6   If the printer is connected to the network, what is the network operating system?

7   If you have a problem printing from a particular software application, what is the application and version number?

Hewlett-Packard Limited Warranty Statement

HP product	Duration of Limited Warranty
Software	1 year
Accessories	1 year
Ink cartridges	90 days
Printheads	1 year
Printer peripheral hardware (see below for details)	1 year

Extent of Limited Warranty

1 Hewlett-Packard warrants to the end-user customer that the HP products specified above will be free from defects in materials and workmanship for the duration specified above, which duration begins on the date of purchase by the customer.

2 For software products, HP's limited warranty applies only to a failure to execute programming instructions. HP does not warrant that the operation of any product will be uninterrupted or error free.

3 HP's limited warranty covers only those defects that arise as a result of normal use of the product, and does not cover any other problems, including those that arise as a result of:

    a Improper maintenance or modification;

    b Software, media, parts, or supplies not provided or supported by HP;

    c Operation outside the product's specifications;

    d Unauthorized modification or misuse.

4 For HP printer products, the use of a non-HP ink cartridge or a refilled ink cartridge does not affect either the warranty to the customer or any HP support contract with the customer. However, if printer failure or damage is attributable to the use of a non-HP or refilled ink cartridge, HP will charge its standard time and materials charges to service the printer for the particular failure or damage.

5 If HP receives, during the applicable warranty period, notice of a defect in any product which is covered by HP's warranty, HP shall either repair or replace the product, at HP's option.

6 If HP is unable to repair or replace, as applicable, a defective product which is covered by HP's warranty, HP shall, within a reasonable time after being notified of the defect, refund the purchase price for the product.

7 HP shall have no obligation to repair, replace, or refund until the customer returns the defective product to HP.

8 Any replacement product may be either new or like new, provided that it has functionality at least equal to that of the product being replaced.

9 HP products may contain remanufactured parts, components, or materials equivalent to new in performance.

10 HP's Limited Warranty Statement is valid in any country/region where the covered HP product is distributed by HP. Contracts for additional warranty services, such as on-site service, are available from any authorized HP service facility in countries/regions where the product is distributed by HP or by an authorized importer.

Limitations of Warranty

TO THE EXTENT ALLOWED BY LOCAL LAW, NEITHER HP NOR ITS THIRD PARTY SUPPLIERS MAKES ANY OTHER WARRANTY OR CONDITION OF ANY KIND, WHETHER EXPRESS OR IMPLIED WARRANTIES OR CONDITIONS OF MERCHANTABILITY, SATISFACTORY QUALITY, AND FITNESS FOR A PARTICULAR PURPOSE.

Limitations of Liability

1 To the extent allowed by local law, the remedies provided in this Warranty Statement are the customer's sole and exclusive remedies.

2 TO THE EXTENT ALLOWED BY LOCAL LAW, EXCEPT FOR THE OBLIGATIONS SPECIFICALLY SET FORTH IN THIS WARRANTY STATEMENT, IN NO EVENT SHALL HP OR ITS THIRD PARTY SUPPLIERS BE LIABLE FOR DIRECT, INDIRECT, SPECIAL, INCIDENTAL, OR CONSEQUENTIAL DAMAGES, WHETHER BASED ON CONTRACT, TORT, OR ANY OTHER LEGAL THEORY AND WHETHER ADVISED OF THE POSSIBILITY OF SUCH DAMAGES.

Local Law

1 This Warranty Statement gives the customer specific legal rights. The customer may also have other rights which vary from state to state in the United States, from province to province in Canada, and from country/region to country/region elsewhere in the world.

2 To the extent that this Warranty Statement is inconsistent with local law, this Warranty Statement shall be deemed modified to be consistent with such local law. Under such local law, certain disclaimers and limitations of this Warranty Statement may not apply to the customer. For example, some states in the United States, as well

as some governments outside the United States (including provinces in Canada), may:

a Preclude the disclaimers and limitations in this Warranty Statement from limiting the statutory rights of a customer (e.g. the United Kingdom);

b Otherwise restrict the ability of a manufacturer to enforce such disclaimers or limitations; or

c Grant the customer additional warranty rights, specify the duration of implied warranties which the manufacturer cannot disclaim, or allow limitations on the duration of implied warranties.

3 FOR CONSUMER TRANSACTIONS IN AUSTRALIA AND NEW ZEALAND, THE TERMS IN THIS WARRANTY 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 THE HP PRODUCTS TO SUCH CUSTOMERS.

8 Printer specifications and regulatory information

Printer specifications

For media and media-handling specifications, see "Selecting print media."

Specification		Value
Available printer models	HP Business Inkjet 2300	C8125A
	HP Business Inkjet 2300n	C8126A
	HP Business Inkjet 2300dtn	C8127A
Physical dimensions (W x H x D)	HP Business Inkjet 2300	553 by 290 by 416 mm (21.8 by 11.4 by 16.4 inches)
	HP Business Inkjet 2300n	553 by 290 by 416 mm (21.8 by 11.4 by 16.4 inches)
	HP Business Inkjet 2300dtn	553 by 355 by 463 mm (21.8 by 14 by 18.2 inches)
Weight	HP Business Inkjet 2300	13.5 kg (29.7 lb) without printheads or ink cartridges
	HP Business Inkjet 2300n	13.5 kg (29.7 lb) without printheads or ink cartridges
	HP Business Inkjet 2300dtn	17.2 kg (37.8 lb) without printheads or ink cartridges
Connectivity	HP Business Inkjet 2300	- IEEE 1284-compliant bidirectional parallel - USB 2.0-compliant full speed 1 open EIO slot 2 DIMM slots (100 pin, SDRAM, PC 100 or greater)
	HP Business Inkjet 2300n	- IEEE 1284-compliant bidirectional parallel - USB 2.0-compliant full speed - HP Jetdirect Internal Print Server for Fast Ethernet 10/100Base-TX in EIO slot 2 DIMM slots (100 pin, SDRAM, PC 100 or greater)
	HP Business Inkjet 2300dtn	- IEEE 1284-compliant bidirectional parallel - USB 2.0-compliant full speed - HP Jetdirect Internal Print Server for Fast Ethernet 10/100Base-TX in EIO slot 2 DIMM slots (100 pin, SDRAM, PC 100 or greater)
Print method		Drop-on-demand thermal inkjet printing
Ink cartridges		4 ink cartridges (1 each for black, cyan, magenta, and yellow)

Specification		Value
Printheads		4 printheads (1 each for black, cyan, magenta, and yellow)
Supply yields (based on 5 percent coverage)	Ink cartridges	Black: 1,750 pages
		Cyan, magenta, and yellow: 1,750 pages
	Printheads	Black: 16,000 pages
		Cyan, magenta, and yellow: 24,000 pages
Printer memory		64 MB of built-in RAM, up to 320 MB with optional 64 or 128 MB DIMM (SDRAM,100 MHz)
Printer processor		Motorola 32-bit ColdFire 4e RISC (256 MHz)
Print speed (U.S. Letter and A4)		Fast mode
		● Black text: 26 pages per minute (ppm)
		● Mixed text with color graphics: 20 ppm
		Normal mode
		● Black text: 9 ppm
		● Mixed text with color graphics: 8 ppm
		Laser-quality speed*
		● Black text: 9 ppm
		● Mixed text with color graphics: 5 ppm
		*The "laser-quality speed" comparison has the page-per-minute speeds of the HP Business Inkjet 2300 series printers against the benchmark of the HP Color LaserJet 4600 at comparable print quality. This comparison is based solely on HP's internal testing.
Resolution	Monochrome	Up to 1200 by 600 dots per inch (dpi)
	Color	HP's enhanced Color Layering Technology with PhotoREt III for photo quality (up to 4800 by 1200-optimized dpi on premium photo papers, 1200 by 1200-input dpi)
Color calibration		● ColorSync
		● ICC Profiles
		● Pantone®
Printer languages		● PCL 5c
		● PCL 6
		● PostScript 3 emulation
		● Automatic language switching
Control panel languages		Czech, Danish, Dutch, English, Finnish, French, German, Hungarian, Italian, Japanese (Katakana), Norwegian, Polish, Portuguese, Russian, Spanish, Swedish, Turkish
Media size		● Standard U.S.: Letter, legal, executive, statement, index cards
		● Standard International: A6, A5, A4
		● Custom U.S.: 3 by 5 inches wide to 8.5 by 14 inches long
		● Custom Metric: 76.2 by 127 mm wide to 216 by 356 mm long
Media type		Paper (plain, inkjet, and photo), envelopes, transparencies, labels, greeting cards
Media handling		Tray 1, Tray 2, output tray

Specification	Value
Recommended Media Weight	● Paper: 16 to 28 lb Bond using Tray 1 or Tray 2 ● Envelopes: 20 to 24 lb Bond ● Cards: 110 lb Index
Media supported (maximum number of pages)	● Tray 1 (up to 0.58 inch or 15 mm stack): 150 sheets of plain paper, 22 envelopes, 30 transparencies ● Tray 2 (up to 0.98 inch or 25 mm stack): 250 sheets of plain paper
Operating system compatibility	● Windows 98, Windows Me, Windows NT 4.0, Windows 2000, Windows XP 32-bit (Professional and Home Editions), and Windows XP 64-bit Edition ● Mac OS 9 (9.1 and later), Mac OS X (10.1 and later) ● OS/2 ● Linux ● UNIX ● MS-DOS printer driver support through third-party applications
Specification	Value

Specification		Value
Network operating system compatibility	HP Business Inkjet 2300	● Windows 98, Windows Me, Windows NT 4.0, Windows 2000, Windows XP 32-bit (Professional and Home Editions), and Windows XP 64-bit Edition
	HP Business Inkjet 2300n HP Business Inkjet 2300dtn	● Windows 98, Windows Me, Windows NT 4.0, Windows 2000, Windows XP 32-bit (Professional and Home Editions), and Windows XP 64-bit Edition ● Novell NetWare 4.x, 5.x, 6, NDS, and NDPS ● HP-UX 10.20, 11.x ● Solaris, 2.6, 7, 8 (SPARC systems only) ● RedHat Linux 7.1 and later ● SuSE Linux 7.1 and later ● Mac OS 9 (9.1 and later), Mac OS X (10.1 and later) ● IBM OS/2 Warp 4.x* ● IBM AIX 3.2.5 and later* ● MPE-iX* ● Microsoft Windows Terminal Server Edition 4.0 ● Microsoft Windows 2003 Server (formerly known as Microsoft Windows XP Server Terminal Services) ● Microsoft Windows 2000 Server Terminal Services with Citrix MetaFrame 1.8 ● Microsoft Windows XP Server Terminal Services with Citrix MetaFrame 1.8 ● Microsoft Windows NT Terminal Server with Citrix V1.8 ● Microsoft Windows NT Terminal Server with Citrix XP ● Microsoft Windows 2000 Server Terminal Services with Citrix V1.8 ● Microsoft Windows 2000 Server Terminal Services with Citrix XP ● Microsoft Windows 2000 Server Terminal Services * Contact your network operating system vendor for software, documentation, and support.

Specification	Value
Compatible network protocols	- TCP/IP - IPX/SPX - AppleTalk* - DLC/LLC - IP Direct Mode - LPD - FTP Printing - IPP - NDS - Bindery - NCP - NDPS - iPrint Telnet - SLP - IGMP - BOOTP/DHCP - WINS - SNMP - HTTP *AppleTalk is not supported on Token Ring print servers. Not all protocol and operating system combinations are supported. For more information, go to http://www.hp.com and http://www.hp.com/support/businessinkjet2300.
Advanced security* *Applies to full-feature HP Jetdirect products with firmware version x.24.yy or later - EIO (610n, 615n and later), LIO (250m), External - USB (310x)	- SNMPv3 - SSL/TLS (HTTPS)

Specification		Value
System requirements **Note:** Graphic-intensive, complex, and large files might require more hard disk space.	Minimum	• **Windows 98:** Pentium® 90 MHz, 16 MB RAM, 100 MB free hard disk space • **Windows Me:** Pentium 150 MHz, 32 MB RAM, 100 MB free hard disk space • **Windows NT 4.0:** Pentium 100 MHz, 32 MB RAM, 100 MB free hard disk space • **Windows 2000:** Pentium 300 MHz, 64 MB RAM, 100 MB free hard disk space • **Windows XP 32-bit edition:** Pentium 233 MHz, 64 MB RAM, 100 MB free hard disk space • **Windows XP 64-bit edition:** Itanium® 733 MHz, 1 GB RAM, 100 MB free hard disk space • **Mac OS 9 (9.1 and later):** 64 MB RAM • **Mac OS X (10.1 and later):** 128 MB RAM
	Recommended	• **Windows 98, and Windows Me:** Pentium 266 MHz, 32 MB RAM, 200 MB free hard disk space • **Windows NT 4.0:** Pentium 266 MHz, 64 MB RAM, 200 MB free hard disk space • **Windows 2000:** Pentium 300 MHz, 64 MB RAM, 200 MB free hard disk space • **Windows XP 32-bit edition:** Pentium 300 MHz, 128 MB RAM, 200 MB free hard disk space • **Windows XP 64-bit edition:** Itanium 733 MHz, 1 GB RAM, 200 MB free hard disk space • **Mac OS 9 (9.1 and later)**: 128 MB RAM • **Mac OS X (10.1 and later):** 256 MB RAM
Product certifications	Safety certifications	CCC S&E (China), CSA (Canada), PSB (Singapore), UL (USA), NOM-NYCE (Mexico), NEMKO-GS (Germany), K Mark (Korea), CE (European Union), B Mark (Poland), IRAM (Argentina)
	EMC Certifications	FCC Title CFR Part 15 (USA), CTICK (Australia and New Zealand), MIC Mark (Korea), CE (European Union), BSMI (Taiwan), GOST (Russia), ICES (Canada), VCCI (Japan)
Font support		• 45 TrueType and 35 PostScript fonts built-in (all PostScript emulation, PCL 5c, and PCL 6 accessible) • Intellifont and TrueType rasterizer built into PCL 5c and PCL 6 • Built-in support for Arabic, Cyrillic, Greek, and Hebrew symbol sets

Specification		Value
Duty cycle		Up to 10,000 pages/month
Warranty		1 year limited warranty
Operating environment	Operating temperature	5° to 40° C (41° to 104° F)
	Recommended operating conditions	15° to 35° C (59° to 95° F)
	Storage temperature	-40° to 60° C (-40° to 140° F)
	Recommended relative humidity	15 to 80 percent noncondensing
Electrical specifications	Power supply	Built-in universal power supply
	Power requirements	Input voltage: 110 to 240 VAC (± 10%), 50 to 60 Hz
	Power consumption	● Printing (maximum): 65 watts ● Standby mode: less than 45 watts ● Off mode: less than 1 watt
Acoustic emissions (Noise levels per ISO 9614-1)	Sound pressure (bystander position)	LpAm 53 dB(A)
	Sound power	LwAm 62 dB(A)

Regulatory information

FCC statement

The U.S. Federal Communications Commission (in 47 cfr 15.105) has specified that the following notices be brought to the attention of users of this product.

This device complies with part 15 of the FCC rules. Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

Shielded cables

Use of a shielded data cable is required to comply with the Class B limits of Part 15 of the FCC Rules.

Pursuant to Part 15.21 of the FCC Rules, any changes or modifications to this equipment not expressly approved by the Hewlett-Packard Company, may cause harmful interference and void the FCC authorization to operate this equipment.

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

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

When connected to LAN cables using print server accessories…

Note   This equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference in which case the user will be required to correct the interference at his own expense.

EMI statement (Europe)

Applicable when connected to LAN cables using print server accessories.

This is a Class A product. In a domestic environment this product may cause radio interference in which case the user may be required to take adequate measures.

EMI statement (Korea)

사용자 안내문 (B 급기기)

이 기기는 비업무용으로 전자파 장해검정을 받은 기기로서, 주거지역에서는
물론 모든 지역에서 사용할 수 있습니다.

Applicable when connected to LAN cables using print server accessories.

사용자 안내문 : A 급 기기

이 기기는 업무용으로 전자파적합등록을 받은 기기이오니, 판매자 또는
사용자는 이 점을 주의 하시기 바라며, 만약 잘못 구입 하셨을 때에는
구입한 곳에서 비업무용으로 교환 하시기 바랍니다.

EMI statement (Japan)

この装置は、情報処理装置等電波障害自主規制協議会（ＶＣＣＩ）の基準
に基づくクラスＢ情報技術装置です。この装置は、家庭環境で使用すること
を目的としていますが、この装置がラジオやテレビジョン受信機に近接して
使用されると受信障害を引き起こすことがあります。
　取り扱い説明書に従って正しい取り扱いをして下さい。

Applicable when connected to LAN cables using print server accessories.

この装置は、情報処理装置等電波障害自主規制協議会（ＶＣＣＩ）の基準
に基づくクラスＡ情報技術装置です。この装置を家庭環境で使用すると電波
妨害を引き起こすことがあります。この場合には使用者が適切な対策を講ず
るよう要求されることがあります。

EMI statement (Taiwan)

警告使用者：
這是甲類的資訊產品，在居住的環境中使用時，可能會造成射頻
干擾，在這種請況下，使用者會被要求採取某些適當的對策。

Regulatory Model Number

For regulatory identification purposes, your product is assigned a Regulatory Model Number.
The Regulatory Model Number for your product is SNPRC-0301. The regulatory number
should not be confused with the product name (HP Business Inkjet 2300) or product number
(C8125A, C8126A, or C8127A).

Power Cord statement

The power cord cannot be repaired. If it is defective, it should be discarded or returned to the supplier.

LED classification

CLASS 1 LED PRODUCT
LED KLASSE 1
APPARECCHIO LED DI CLASSE 1
PRODUCT CLASY 1 Z DIODAMI (EWHECYCMILED)
Appareil à Diode Electriuminescente de Classe 1
ZARIZENI LED TRIY 1
KLASS 1 LED APPARAT
LUOKAN 1 LED

Energy consumption

Energy Star is a US registered service mark of United States Environmental Protection Agency.

Declaration of Conformity statement/Normes de sécurité (Canada)

This digital apparatus does not exceed the Class B limits for radio noise emissions from digital apparatus set out in the Canadian ICES-003.

When connected to LAN cables using print server accessories, this digital apparatus does not exceed the Class A limits for radio noise emissions from digital apparatus set out in the Canadian ICES-003.

Le présent appareil numérique n'émet pas de bruits radioélectriques dépassant les limites applicables aux appareils numériques de Classe B prescrites dans la réglement sur le brouillage radioélectrique édicté par le NMB-003 du Canada.

Connecté à un réseau par des accessoires de serveur, l'appareil n'émet pas de bruits radioélectriques dépassant les limites applicables aux appareils numériques de Classe A prescrites dans le réglement sur le brouillage radioélectrique édicté par la NMB-003 du Canada.

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

Manufacturer's Name: Hewlett-Packard Singapore (Pte) Ltd

Manufacturer's Address: Imaging and Printing Manufacturing Operation Singapore
20 Gul Way, Singapore 629196.

declares, that the product

Product Name: HP Business Inkjet 2300, HP Business Inkjet 2300n,
HP Business Inkjet 2300dtn

Product Number: C8125A, C8126A,
C8127A.

Regulatory Model Number: SNPRC-0301

Product Accessory Number: C8245A / 500-sheet Tray 2
C8247A / HP auto-duplex unit

Product Options: All

conforms to the following Product Specifications:

Safety: IEC 60950: 1999 / EN 60950: 2000
IEC 60825-1: 1993+A1: 1997+A2: 2001 / EN 60825-1: 1994 Class I for LEDs

EMC: CISPR 22: 1997 / EN 55022:1998 Class B [1][2]
CISPR 24:1997 + A1 / EN 55024: 1998 + A1

IEC 61000-3-2:1995 + A14 / EN 61000-3-2: 1995 + A14
IEC 61000-3-3:1994 +A1 / EN 61000-3-3:1995 + A1

FCC Title 47 CFR, Part 15 Class B / VCCI-2 [1][2]
AS / NZS 3548:1995 / ICES-003, Issue 3 Class B [1][2]

Supplementary Information:
The product herewith complies with the requirements of the Low Voltage Directive 73/23/EEC and the EMC Directive 89/336/EEC, and carries the CE marking accordingly.

(1) This product exhibits Class A operation when connected to LAN cables using print server accessories.

(2) The product was tested in a typical configuration with Hewlett Packard personal computer systems.

09 April 2003   **Chan Kum Yew, Director of Quality**

Australia Contact: Product Regulations Manager, Hewlett Packard Australia Ltd., 31-41 Joseph Street, Blackburn, Victoria 3130, Australia

European Contact: Hewlett-Packard GmbH, HQ-TRE, Herrenberger Strasse 140, 71034 Boeblingen, Germany

USA Contact: Corporate Product Regulations Manager, Hewlett Packard Company, 3000 Hanover Street, Palo Alto, CA 94304, USA (Phone: 415-857-1501).

A Control panel menus

The control panel allows you to change printer settings, view printer status and printer messages, and diagnose printer problems. Additional menu items can appear in the control panel, depending on the options installed in the printer.

Printing a control panel menu map

You can print a menu map of the settings that can be accessed through the control panel.

1   Press ✓ (select button) on the control panel.

2   Press ▼ (down arrow button) to highlight INFORMATION, and then press ✓ (select button).

3   Press ✓ (select button) to select PRINT MENU MAP.

Note   If the auto-duplex unit is installed and the duplex option is set to ON in the control panel, do not remove the page from the printer until both sides are finished printing.

Changing printer settings from the control panel

The control panel is one of three ways to set options in the printer. You can also change options from the printer driver and the software applications from which you print. Printer driver and application settings override control panel settings for the current print job. Application settings override default printer driver settings.

Menu items in the control panel are numbered from 1 to 9. If a menu has more than nine items, the additional items will appear with a letter value from A to Z. However, the numbers and letter values are not included in the procedures in this guide.

For more information about any control panel menu or item, press ? (help button).

To access the menus and settings

1   Press ✓ (select button) on the control panel to enter the menus.

2   Navigate to the menu or submenu that contains the setting you want to change.

- Press ▼ (down arrow button) or ▲ (up arrow button) to highlight the desired menu. (Hold down either of these buttons to auto-scroll through the selections.) Press ✓ (select button) to access the desired menu. Repeat this procedure to access submenus.

- Press ▼ (down arrow button) or ▲ (up arrow button) to highlight the desired setting, and then press ✓ (select button) to save the setting. An asterisk (*) appears next to the setting in the display, indicating that the new setting is now the default.

3   Press ✕ (cancel job button) to exit the menus and return the printer to the READY state. If no key is pressed for 30 seconds, the printer returns automatically to the READY state.

Information menu

This menu contains printer information pages that give details about the printer and its configuration. To print an information page, scroll to the desired page and press ✓ (select button).

Message	Description
PRINT MENU MAP	This item prints a map of the printer menu structure.
PRINT CONFIGURATION PAGE	This item prints a page describing the current printer configuration (such as firmware version, model, accessories installed, I/O support, or other details). If an HP Jetdirect print server is installed, a second page will be printed, which displays the settings for the HP Jetdirect print server.
PRINT DIAGNOSTIC PAGE	This item prints a diagnostic page describing the current printer configuration, printhead information, and technical information.
PRINT DEMO	This item prints a demonstration page.
PRINT PCL FONT LIST	This item prints the available PCL fonts.
PRINT PS FONT LIST	This item prints the available PS (emulated PostScript) fonts.
SHOW IP ADDRESS	This item displays the printer's default IP address.

Paper Handling menu

These settings control the default media options. However, settings made in the software application from which you print or in the printer driver override control panel settings for the current print job.

Message	Value or Submenu	Description
TRAY 1 SIZE	NOT SET EXECUTIVE LETTER LEGAL STATEMENT A5 A4 B5 (JIS) B5 (ISO) HAGAKI CARD OFUKU HAGAKI A6 INDEX CARD 3 X 5 INDEX CARD 4 X 6 INDEX CARD 5 X 8 ENVELOPE MONARCH ENVELOPE #10 ENVELOPE DL ENVELOPE C5 ENVELOPE C6 ENVELOPE A2 JAPANESE ENVELOPE CHOU #3 JAPANESE ENVELOPE CHOU #4 HP GREETING CARD ENVELOPE CUSTOM	This item allows you to select the media size loaded in Tray 1. Default = NOT SET

Message	Value or Submenu	Description
TRAY 1 TYPE	NOT SET PLAIN PAPER HP PREMIUM PAPER HP HEAVYWEIGHT PREMIUM PAPER HP PREMIUM TRANSPARENCY FILM HP PREMIUM PLUS TRANSPARENCY FILM HP EVERYDAY PHOTO PAPER, MATTE FINISH HP EVERYDAY PHOTO PAPER, SEMI GLOSS HP COLORFAST PHOTO PAPER, GLOSSY HP PREMIUM + PHOTO PAPER, GLOSSY HP PREMIUM + PHOTO PAPER, MATTE HP PREMIUM PHOTO PAPER, GLOSSY HP PHOTO PAPER, GLOSSY HP BROCHURE & FLYER, GLOSS HP BROCHURE & FLYER, MATTE	This item allows you to select the media type loaded in Tray 1. Default = NOT SET
TRAY 2 SIZE	NOT SET LETTER LEGAL EXECUTIVE A4 B5 (JIS)	This item allows you to select the media size loaded in Tray 2. Default = NOT SET
TRAY 2 TYPE	NOT SET PLAIN PAPER	This item shows the media type for Tray 2. Default = NOT SET
DEFAULT TRAY	TRAY 1 TRAY 2	This item allows you to set the default tray. If a tray is not selected in the printer driver, the printer will draw media from this tray. Default = TRAY 2
AUTOMATIC MEDIA TYPE SENSE	OFF ON	This item allows you to enable the media type sensor. Default = OFF
FAST NORMAL PRINT SPEED	HIGH LOW	This item helps to improve the printing speed when Fast Normal print quality is selected. Default = HIGH

Configure Device menu

Items in this menu affect printer behavior. Configure the printer according to your printing needs.

Message	Value or Submenu	Description
PRINT PS/PCL6 ERRORS	OFF ON	This item allows you to print a list of PS/PCL6 errors. Default = OFF
UNATTENDED PRINTING	OFF ON	This item sets the printer to pause during large print jobs (after every 100 pages) so that you can clear the output tray. Default = OFF
SYSTEM SETUP	PERSONALITY	This item sets the default personality to automatic switching, PCL5, PCL6, or PostScript emulation. Default = AUTO
	LANGUAGE	This item sets the default language. Select it from the list of supported languages. Default = ENGLISH
I/O	I/O TIMEOUT	This item sets the length of time (from 5 to 300 seconds) that the printer waits for remaining data for a print job. If that time is exceeded, the printer prints the print job. Default = 15
	EIO	This item allows you to access submenus for the HP Jetdirect print server, if one is installed. For details, see "Changing networking parameters from the control panel."
RESET FACTORY SETTINGS	YES NO	This item restores all values to the printer's predetermined factory values. See "Resetting the printer."

Resetting the printer

You may need to reset the printer in the following circumstances:

- You want to restore the printer's default settings.
- Communication between the printer and computer has been interrupted.

CAUTION When you use the restore factory settings option on this menu, you can lose printer configuration settings.

Note This option does not reset an HP Jetdirect print server to its default settings if one is installed in the printer. To reset the HP Jetdirect print server, see "Resetting the HP Jetdirect print server."

Printing menu

The items in this menu are used when printing from MS-DOS®, UNIX, and Linux. If your computer is running Windows or Mac OS, configure these settings using the printer driver.

Message	Value or Submenu	Description
COPIES	1 - 100	This item sets the number of copies to print. Default = 1
DEFAULT PAPER SIZE	LETTER A4	This item allows you to set the default media size. Default = LETTER
DEFAULT PAPER TYPE	PLAIN PAPER HP PREMIUM PAPER HP HEAVYWEIGHT PREMIUM PAPER HP PREMIUM TRANSPARENCY FILM HP PREMIUM PLUS TRANSPARENCY FILM HP EVERYDAY PHOTO PAPER, MATTE FINISH HP EVERYDAY PHOTO PAPER, SEMI GLOSS HP COLORFAST PHOTO PAPER, GLOSSY HP PREMIUM + PHOTO PAPER, GLOSSY HP PREMIUM + PHOTO PAPER, MATTE HP PREMIUM PHOTO PAPER, GLOSSY HP PHOTO PAPER, GLOSSY HP BROCHURE & FLYER, GLOSS HP BROCHURE & FLYER, MATTE	This item allows you to set the default media type. Default = PLAIN PAPER
DUPLEX	OFF ON	This item appears only when an auto-duplex unit is installed. Set the value to ON to print on both sides (duplex) or OFF to print on one side of a sheet of paper. For more information, see "Printing on both sides of the page." Default = OFF
OVERRIDE A4/LETTER	NO YES	This item sets the printer to print an A4 job on letter-size paper when no A4 paper is loaded, or to print a letter-size job on A4 paper when no letter-size paper is loaded. Default = NO

Message	Value or Submenu	Description
PCL	FORM LENGTH ORIENTATION FONT NUMBER FONT PITCH FONT POINT SIZE SYMBOL SET ISE FONTS APPEND CR TO LF	This item allows you to configure settings for printer control language (PCL) when using the PCL 5c or PCL 6 printer personality.

Maintenance menu

The Maintenance menu contains the following submenus:

- Print Quality menu
- Diagnostics menu
- Paper Path Test menu

Print Quality menu

This menu allows you to adjust aspects of print quality, including calibration, printhead alignment, and quality level.

Message	Value or Submenu	Description
ALIGN PRINTHEADS	N.A.	This item begins the printhead alignment process.
COLOR CALIBRATION	N.A.	This item begins the color calibration process.
LINEFEED CALIBRATION	N.A.	This item begins the linefeed calibration process.
CLEAN PRINTHEADS	N.A.	This item begins the printhead cleaning process.
DEFAULT QUALITY LEVEL	FAST FAST NORMAL NORMAL BEST	This item allows you to select the default level for print quality. This setting is used if the print job contains no print-quality selection. Default = NORMAL

Diagnostics menu

This menu allows you to view the printer's event log.

Message	Description
SHOW EVENT LOG	This item displays the last 10 events on the control panel, starting with the most recent event.

Paper Path Test menu

This menu allows you to test various components of the printer so you can identify and solve problems.

Message	Description
START TEST SOURCE DUPLEX COPIES	The items on this menu let you test the paper handling features of the printer. If you have difficulty printing from one of the trays, or printing on both sides of the page, run this test to verify that the paper path is working properly.

Changing networking parameters from the control panel

The EIO (enhanced input/output) submenu appears on the I/O menu only when an HP Jetdirect print server is installed. If the printer contains an HP Jetdirect print server, you can configure basic networking parameters using the EIO menu. Network printer administrators can also use HP Web Jetadmin or the embedded Web server to configure these and other parameters remotely.

Note   The items available on the menu vary depending on the particular print server that is installed.

EIO menu

This menu allows you to configure the networking parameters for the printer. To check the printer's current network settings, print a Jetdirect Configuration page. See "Printing a Configuration page."

Message	Value or Submenu	Description
CFG NETWORK	NO YES	Selects whether or not you want to use the EIO Jetdirect menu items. You must change this option to YES each time you want to use the EIO Jetdirect menu.
IPX/SPX DLC/LLC TCP/IP ATALK	ON OFF	Selects whether to enable or disable a protocol. Select OFF to disable a protocol.
CFG IPX/SPX	NO YES	Selects whether to use the IPX/SPX menu and set the IPX/SPX protocol parameters.
		In the IPX/SPX menu, you can specify the frame type parameter used on your network. ● The default is AUTO, which automatically sets and limits the frame type to the first one detected. ● For Ethernet networks, frame type selections include EN_8023, EN_II, EN_8022, and EN_SNAP. ● For Token Ring networks, frame type selections include TR_8022 and TR_SNAP. In the submenu for Token Ring cards, you can also specify the NetWare Source Routing parameter, which can be AUTO (default), OFF, SINGLE R, or ALL RT.

Message	Value or Submenu	Description
CFG TCP/IP	NO YES	Selects whether to use the TCP/IP menu and set the TCP/IP protocol parameters.
		In the TCP/IP menu, you can specify BOOTP=YES or DHCP=YES for TCP/IP parameters to be automatically configured by a BootP or DHCP server when the printer is turned on. If you specify BOOTP=NO and DHCP=NO, you can choose AUTO IP=YES to have a link-local address 169.254.x.x assigned automatically. If you specify BOOTP=NO, DHCP=NO, and AUTO IP=NO, you can manually set the following TCP/IP parameters from the control panel: ● IP address (IP) ● Subnet Mask (SM) ● Syslog Server (LG) ● Default Gateway (GW) ● Idle Timeout period (default is 270 seconds; 0 disables the timeout) When setting IP numbers, press ▲ (up arrow button) to increase the number by 1. Press ▼ (down arrow button) to decrease the number by 1. Press ✓ (select button) to make your selection.
CFG LINK	NO YES	Selects whether you want to manually configure the HP Jetdirect 10/100Base-TX print server's network link speed and communication mode.
		The HP Jetdirect settings must match the network. The default setting is NO, which bypasses the link configuration menu items. If you specify YES, you can select one of the following link configuration menu items: ● AUTO (default): The print server automatically configures itself to match the link speed and communication mode of the network. If it fails, 100TX HALF will be set. ● 10T HALF: 10 Mbps, half-duplex operation ● 10T FULL: 10 Mbps, full-duplex operation ● 100TX HALF: 100 Mbps, half-duplex operation ● 100TX FULL: 100 Mbps, full-duplex operation
WEB	HTTPS HTTP/HTTPS	For configuration management, specify whether the embedded Web server will accept communications using HTTPS (Secure HTTP) only, or both HTTP and HTTPS. ● HTTPS: For secure, encrypted communications, only HTTPS access is accepted. The print server will appear as a secure site. ● HTTP/HTTPS: Access using either HTTP or HTTPS is permitted.
SECURITY	KEEP RESET	Specify whether the current security settings on the print server will be saved or reset to factory defaults. ● KEEP (default): The current security settings are maintained. ● RESET: Security settings are reset to factory defaults.

Novell NetWare frame type parameters

The HP Jetdirect print server automatically selects a NetWare frame type. Select a frame type manually only when the print server selects an incorrect frame type. To identify the frame type chosen by the HP Jetdirect print server, print a Configuration page from the control panel. See "Printing a Configuration page."

The following frame types are supported:

- Ethernet_802.3
- Ethernet_II
- Ethernet_802.2
- Ethernet_SNAP

Disabling network protocols (optional)

By factory default, all supported network protocols are enabled. Disabling unused protocols has the following benefits:

- It decreases printer-generated network traffic.
- It prevents unauthorized users from printing to the printer.
- It provides only pertinent information on the Configuration page.
- It allows the control panel to display protocol-specific error and warning messages.

To disable network protocols

Note   Do not disable the IPX/SPX protocol if Windows 98, Windows NT, Windows Me, Windows 2000, or Windows XP users will be printing to the printer.

1   Press ✓ (select button) on the control panel to enter the menus.

2   Press ▼ (down arrow button) to highlight CONFIGURE DEVICE, and then press ✓ (select button).

3   Press ▼ (down arrow button) to highlight I/O, and then press ✓ (select button).

4   Press ▼ (down arrow button) to highlight EIO [X] JETDIRECT SUBMENU, and then press ✓ (select button).

5   Press ▼ (down arrow button) to highlight the network protocol you want to disable, and then press ✓ (select button).

6   Press ▼ (down arrow button) to highlight OFF, and then press ✓ (select button).

7   Press ✕ (cancel job button) to return to the READY state.

Resetting the HP Jetdirect print server

Resetting the HP Jetdirect print server restores the factory default values of the Jetdirect print server.

Note   When you restore the factory default values for the HP Jetdirect print server, all previously stored EIO settings are lost.

To reset the HP Jetdirect print server

1   Press ⏻ (power button) to turn off the printer.

2   While holding down both ↰ (back button) and ⬇ (resume button) on the control panel, turn on the printer.

B Control panel messages

The table in this appendix explains messages that can appear on the control panel.

To resolve a message, follow the instructions displayed on the control panel. If following these instructions does not resolve the message, press ⏻ (power button) to turn off the printer, and then turn on the printer again. If the message persists after performing all of the recommended actions, contact an HP-authorized service or support provider.

Control panel message types

Status messages

Status messages reflect the current state of the printer. They inform you of normal printer operation and require no action to clear them. They change as the state of the printer changes. Whenever the printer is ready, not busy, and has no pending warning messages, the status message READY is displayed if the printer is online.

Warning messages

Warning messages inform you of events that require your attention, but do not prevent the printer from printing. An example of a warning message is CYAN INK LOW. These messages remain displayed until ⏬ (resume button) is pressed.

Error messages

Error messages communicate that some action must be performed, such as adding media or clearing a media jam. Take the appropriate action and press ⏬ (resume button) to continue printing.

If the error message shows an error code, press ⏻ (power button) to turn the printer off, and then turn it on again. In most situations, this action solves the problem. If the message persists, your printer might need service. Write down the error code, and then go to HP Instant Support to learn more about possible causes for the message. See "HP Instant Support" for more information.

Critical error messages

Critical error messages inform you of a device failure. Some of these messages can be cleared by pressing ⏻ (power button) to turn the printer off, and then on again. If a critical error persists, service is required.

Control panel messages

The following table lists and describes control panel messages, in alphabetical order.

Message	Description
`[COLOR] INK CARTRIDGE EMPTY`	An ink cartridge is empty. Replace the ink cartridge to continue printing. See "Replacing ink cartridges" for more information.
`[COLOR] INK CARTRIDGE EXPIRED`	An ink cartridge has expired. Replace the ink cartridge to continue printing. See "Replacing ink cartridges" for more information.
`[COLOR] INK CARTRIDGE MISSING`	An ink cartridge is missing or not correctly installed. Install the ink cartridge in the correct slot, making sure you press down firmly on the cartridge until it snaps into place. See "Replacing ink cartridges" for more information.
`[COLOR] INK CARTRIDGE WILL EXPIRE SOON`	An ink cartridge is nearing its expiration date. Be prepared to replace it with a new ink cartridge. Press 🔄 (resume button) to clear this message.
`[COLOR] INK IS LOW`	An ink cartridge is running low on ink. Be prepared to replace it with a new ink cartridge. Press 🔄 (resume button) to clear this message.
`[COLOR] PRINTHEAD MISSING`	A printhead is missing or not correctly installed. Check that the protective tape has been removed from the printhead. Install the printhead in the correct slot, making sure you press down firmly on the printhead to ensure proper contact. See "Replacing printheads" for more information.
`[TRAY X OR ACCESSORY] NOT AVAILABLE... PRESS RESUME OR CANCEL`	The specified tray or auto-duplex unit is not available. To use media from another tray, or print without duplexing, press 🔄 (resume button). To cancel the job, press ✕ (cancel button).
`ATTENTION`	This informs you that some action must be performed. Follow the instruction that accompanies this message.
`CANCELLING JOB`	The printer is canceling a print job. No action is required.
`CARRIAGE STALL..CLEAR CARRIAGE OBSTRUCTION AND PRESS RESUME TO CONTINUE`	Something is preventing the carriage from moving. Open the top cover, clear the obstruction, and then press 🔄 (resume button).
`CHECKING PRINTHEADS`	The printer is checking the printheads. Please wait.
`CLEANING PRINTHEADS`	The printer is cleaning the printheads. Please wait.
`CLOSE ALL COVERS`	The printer covers are open or not closed completely. Close all covers to continue printing.
`COMMUNICATION ERROR...CHECK ALL CONNECTIONS TO THE PRINTER AND PRESS RESUME TO CONTINUE`	Check the cable connecting the printer to the computer or network. Ensure that it is properly connected, then press 🔄 (resume button).
`COMMUNICATION ERROR...POWER OFF AND ON AGAIN`	The printer is unable to continue printing due to a communication error. Press ⏻ (power button) to turn the printer off, then turn it on again.

Message	Description
`INCOMPATIBLE [COLOR] PRINTHEAD`	An incorrect printhead is installed. Remove the printhead and replace it with the correct printhead. See "Supplies" for information about the printheads that can be used with your printer.
`INITIALIZING`	The printer is initializing. Please wait.
`INSUFFICIENT MEMORY`	More data has been received from the computer than fits in the printer's memory. If you frequently print large or complex documents, you may want to install more memory. Press ⬇ (resume button) to clear this message.
`LOAD [SIZE] MEDIA IN TRAY [X]. PRESS RESUME TO CONTINUE`	The specified tray is configured for a specific media size required for a print job that has been sent, but the tray is empty. Load the specified media size into the tray, then press ⬇ (resume button) to continue printing.
`LOAD [TYPE] [SIZE] IN TRAY [X]. PRESS RESUME TO CONTINUE.`	The specified tray is configured for a specific media type and size required for a print job that has been sent, but the tray is empty. Load the specified media into the tray, then press ⬇ (resume button) to continue printing.
`PAPER JAM, REMOVE REAR ACCESS PANEL/AUTO-DUPLEX UNIT TO CLEAR PAPER. PRESS RESUME TO CONTINUE`	Media is jammed in the printer. Remove the rear access panel or the auto-duplex unit, and remove the jammed media. Press ⬇ (resume button) to continue printing.
`PAPER STALL..PRESS RESUME TO CONTINUE`	A printer motor has stalled. Press ⬇ (resume button) for the printer to attempt automatic recovery and clear the message. If the message persists, contact an HP-authorized service or support provider.
`POWERING OFF`	The printer is preparing to turn off.
`PRINTED PAGE IS DRYING... PRESS RESUME TO CONTINUE`	The printer is waiting for the printed page to dry before continuing to print. You can remove the page from the output tray (handle it carefully to avoid smearing the ink), and press ⬇ (resume button) to start printing the next page.
`PRINTHEAD LATCH OPEN`	Make sure the printhead latch is properly secured and all covers are closed.
`PROCESSING JOB`	The printer is printing a document. Please wait.
`PUMP STALL..PRESS RESUME TO CONTINUE`	A printer motor has stalled. Press ⬇ (resume button) for the printer to attempt automatic recovery and clear the message. If the message persists, contact an HP-authorized service or support provider.
`READY`	The printer is idle and ready to accept print jobs.
`REAR ACCESS PANEL OPEN`	The rear access panel is not closed completely. Push it in firmly until it locks into place.
`REMOVE PRINTED PAGES FROM OUTPUT TRAY, PRESS RESUME TO CONTINUE`	The output tray is full. Remove the printed pages and press ⬇ (resume button) to continue printing.
`REPLACE [COLOR] INK CARTRIDGE`	An ink cartridge is empty or expired. Replace with a new ink cartridge to continue printing. See "Replacing ink cartridges."
`REPLACE [COLOR] PRINTHEAD`	A printhead has failed. Replace with a new printhead to continue printing. See "Replacing printheads."

Message	Description
SERVICE STALL..PRESS RESUME TO CONTINUE	A printer motor has stalled. Press 🔽 (resume button) for the printer to attempt automatic recovery and clear the message. If the message persists, contact an HP-authorized service or support provider.
TRAY 2 DOES NOT SUPPORT THIS CUSTOM SIZE MEDIA. LOAD MEDIA IN TRAY 1 AND PRESS RESUME TO PRINT FROM TRAY 1	Tray 2 does not support the specified media size for a print job that has been sent. Load the custom media in Tray 1 instead, and press 🔽 (resume button) to print.
UNKNOWN [COLOR] INK CARTRIDGE. PRESS RESUME PRINTER DAMAGE/FAILURE DUE TO USE OF NON-HP INK IS NOT COVERED UNDER THE WARRANTY. PRESS RESUME HP WILL CHARGE ITS STANDARD TIME AND MATERIALS CHARGES TO SERVICE/REPAIR THE DAMAGE/FAILURE. PRESS RESUME REPLACE INK CARTRIDGE OR PRESS RESUME TO ACCEPT USE OF NON-HP INK	The printer has detected a non-HP ink cartridge. Damage to the printer that results from modifying or refilling HP ink cartridges, or from using non-HP ink cartridges, is not covered under the warranty. HP will charge its standard time and materials charges to service or repair the damage. Replace with an HP ink cartridge (see "Supplies") to clear the messages.

C Printing using PostScript emulation

Printer features vary among printer drivers and operating systems. This appendix provides information about the features of the emulated Postscript printer driver when installed on Windows 98, Windows Me, and Windows NT 4.0 only.

Operating system	Version number
Windows 98, Windows Me	Microsoft PScript Driver Version 4.01 and HP Business Inkjet 2300 PPD
Windows NT 4.0	Microsoft PScript Driver Version 4.50 and HP Business Inkjet 2300 PPD

Note   If you are running another Windows operating system, see the online help for the printer driver you are using.

Installation notes

When you are operating in a Windows environment, the installer program will detect the version of the operating system that you are running. The software will be installed in the language selected in the regional settings (configured in the Windows Control Panel). This means that you can be running an English version of Windows and have the language preference set to Spanish, and the installer program will install the Spanish version of the printer software by default.

Upgrading from an older version of Windows

When you upgrade to a new version of Windows, you must reinstall the printer driver. For example, if you upgrade from Windows NT 4.0 to Windows 2000, you must reinstall the printer driver.

Identifying different printer drivers in Windows NT 4.0

If you have already installed a printer driver that was supplied with your Windows operating system for the printer, and you have also installed the printer software supplied with the printer, multiple printer drivers might exist on your computer system. Use these steps to find out which printer drivers are installed.

1   On the **Start** menu, click **Settings** and then click **Printers**.

2   Right-click on the printer name and then click **Properties**.

3   At the **Properties** window, click the **General** tab, and then click the **Print Test Page** button.

If you are using the printer driver that is provided for the printer, the Printer Test Page will include the following information (shown with sample data).

Printer Name: <user definable>

Printer Model: HP Business Inkjet 2300 PS

Printer Driver Name: PSCRIPT4.DLL

Printer Driver Version: 4.01

Installing the printer driver only

If you obtained only a printer driver and its associated files (for example, through the HP website), install them using the following steps.

1   Close all applications, terminate-and-stay-resident (TSR) programs, and virus checkers.

2   On the **Start** menu, click **Settings**, then **Printers**, and then double-click **Add Printer**.

3   When prompted to select a printer, click **Have Disk**. Use **Browse** to enter the path where the printer driver files are located.

4   Follow the instructions on your screen to complete the installation.

Current HP Business Inkjet users

If you currently have an HP Business Inkjet printer driver installed on your computer system, this printer software can be safely installed. It can coexist with printer drivers for different printers. It will replace and update only previous versions of the printer software for this printer. The new printer driver will have property pages similar to your older printer driver, but it will reflect the features and capabilities of the current printer driver.

Specific printer features and issues

The printer driver provides default properties for most applications. You need to change these properties only if you are installing a new printer option, such as more memory; or if you are changing a specific feature.

Printer option	Windows 98/Me	Windows NT
Tray 1	✓	✓
Tray 2	✓	✓
Auto-duplex unit		
Memory configuration	✓	✓

To complete the request for property changes, click either **Apply** or **OK**. **Apply** activates the changes without closing the Properties dialog box. **OK** activates the changes and closes the Properties dialog box.

Printer features

The following table shows which features are available for each Windows operating system.

Printer feature	Windows 98/Me	Windows NT
Paper Type	✓	✓
Print Quality	✓	✓
Print in Grayscale	✓	✓
Handout (N-up printing)	✓	✓
Watermark	✓	✓

Paper Type (Windows 98) or Media Type (Windows NT 4.0)

Operating system	Location in printer driver
Windows 98, Windows Me	Paper tab, More Options...
Windows NT 4.0	Advanced tab, Printer Features

Options:

HP Plain Paper; HP Premium Inkjet Paper; HP Premium Inkjet Heavyweight Paper; HP Photo Quality Paper, Semi Gloss; HP Photo Quality Paper, Matte; HP Everyday Photo Paper, Semi Gloss; HP Everyday Photo Paper, Matte; HP Premium Transparency; HP Premium Plus Transparency; HP Photo Paper, Glossy; HP Premium Photo Paper, Glossy; HP Premium Plus Photo Paper, Glossy; HP Premium Plus Photo Paper, Matte; HP Colorfast Photo Paper, Glossy; HP Brochure & Flyer, Gloss; HP Brochure & Flyer, Matte.

The Paper Type feature allows you to specify the type of paper on which you will be printing, such as plain paper or transparencies. Do not click **HP Premium Transparencies** when printing on regular paper.

Note   HP does not recommend using stiff media such as card stock.

Print Quality

Operating system	Location in printer driver
Windows 98, Windows Me	Paper tab, More Options...
Windows NT 4.0	Advanced tab, Printer Features

Options:

Best, Normal, Fast.

Best prints the best quality possible. Normal is the recommended mode for everyday printing. Fast uses less ink, but the quality is not as high as normal.

Print Color as Gray

Operating system	Location in printer driver
Windows 98, Windows Me	Device Options tab, Printer Features
Windows NT 4.0	Advanced tab, Printer Features

Options:

On, Off.

To activate grayscale printing, change the Print Color as Gray setting to on. This overrides your color settings and prints your documents in black and white (monochrome, grayscale). Grayscale means shades of gray, starting with white and ending with black. When a color document is printed in grayscale, colors are converted to their grayscale equivalents, which means that different colors are represented as different shades of gray.

This printer can produce up to 256 shades of gray. Color images that are printed as monochrome print faster and are easier to reproduce on monochrome devices such as copiers and fax machines. When Print Color as Gray is On, *all* of your documents will print as grayscale until the setting is changed to Off.

Pages per Sheet

Operating system	Location in printer driver
Windows 98, Windows Me	Paper tab, Layout
Windows NT 4.0	Advanced tab, Printer Features

Options:

1, 2, and 4 pages per sheet. Windows NT 4.0 also offers 6, 9, and 16 pages per sheet, with all Windows NT 4.0 settings in both portrait and landscape and rotated landscape orientation.

The Pages per Sheet option, sometimes called layout or n-up, specifies the number of pages to print on a single sheet of paper. The multiple pages appear decreased in size and arranged based on the number of pages printed on the sheet. The Pages per Sheet option does not work effectively with all page setup options. Some applications request a different resolution, page size, or paper source, or orientations for different pages of a document. Combining page setup options while using the Pages per Sheet option might produce unexpected print results.

Watermark Printing

Operating system	Location in printer driver
Windows 98, Windows Me	Device Options tab
Windows NT 4.0	Advanced tab, Printer Features

The Watermark options allow you to specify that text be placed underneath (in the background) of an existing document. For example, you may want to have large gray letters reading Draft or Confidential placed diagonally across the first page or all pages of a document. You can also specify the font, size, angle, and style of the watermark.

Watermark/Overlay

Options:

None, Watermark, Overlay.

This selection specifies whether a watermark is printed. Overlay prints the watermark on top of any text or graphics, so that what appears beneath is not visible.

Watermark Page

Options:

All Pages, First Page Only.

The First Page Only option prints only on the first page of the current document.

Watermark

Options:

Draft, Company Confidential, Company Proprietary, Company Private, Confidential, Copy, Copyright, File Copy, Final, For Internal Use Only, Preliminary, Proof, Review Copy, Sample, Top Secret, Urgent, Custom.

The options listed are the available words that can be printed as a watermark. Custom lets you specify your own words. To turn watermark printing off, click None. If watermark printing is turned off, then the following watermark features are ignored.

Watermark Font

Options:

Courier Bold, Times Bold, Helvetica Bold.

If you are printing a watermark, select one of the three font types.

Watermark Size

Options:

24, 30, 36, 42, 48, 54, 60, 66, 72, 78, 84, 90.

All option values are in points. The watermark size represents the point size of the watermark word printed.

Watermark Angle

Options:

90, 75, 60, 45, 30, 15, 0, -15, -30, -45, -60, -75, -90.

All option values are in degrees. The watermark can be positioned on the page at an angle in 15-degree increments. With zero (0) as normal readable text, the positive angles will rotate the text counterclockwise up to 90 degrees (vertical). The negative angles will rotate the text clockwise up to 90 degrees (vertical).

Watermark Style

Options:

Narrow Outline, Medium Outline, Wide Outline, Wide Halo, Outline.

The style of the watermark defines the line thickness of the watermark word.

Watermark Color

Options:

Gray, Red, Orange, Yellow, Green, Blue, Violet.

This sets the color of the watermark.

Watermark Intensity

Options:

Darkest, Darker, Dark, Medium Dark, Medium, Medium Light, Light, Lighter, Lightest.

This sets the intensity of the watermark.

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