

# Dell Printer | E310dw

## User's Guide

Regulatory Model: Dell E130dw





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# Before You Use Your Dell Machine

- Definitions of Notes
- Important Note

## Definitions of Notes

We use the following symbols and conventions throughout this User's Guide:



WARNING indicates a potentially hazardous situation which, if not avoided, could result in death or serious injuries.



CAUTION indicates a potentially hazardous situation which, if not avoided, may result in minor or moderate injuries.

**IMPORTANT**

IMPORTANT indicates a potentially hazardous situation which, if not avoided, may result in damage to property or loss of product functionality.

**NOTE**

NOTE specifies the operating environment, conditions for installation, or special conditions of use.



Tips icons provide helpful hints and supplementary information.



Electrical Hazard icons alert you to possible electrical shock.



Fire Hazard icons alert you to the possibility of a fire.



Hot Surface icons warn you not to touch hot machine parts.



Prohibition icons indicate actions you must not perform.

**Bold**

Bold style identifies buttons on the machine's control panel or computer screen.

*Italics*

Italicized style emphasizes an important point or refers you to a related topic.

Courier New

Courier New font identifies messages shown on the machine's LCD.

## Important Note

- This product is approved for use in the country of purchase only. Do not use this product outside the country of purchase as it may violate the wireless telecommunication and power regulations of that country.
- Windows Server®2003 in this document represents Windows Server®2003, Windows Server®2003 x64 Edition, Windows Server®2003 R2 and Windows Server®2003 R2 x64 Edition.
- Windows Server®2008 in this document represents Windows Server®2008 and Windows Server®2008 R2.
- Unless otherwise specified, the screens in this manual are from Windows®7 and OS X v10.8.x. Screens on your computer may vary depending on your operating system.
- Locate this product in a well-ventilated area. Do not obstruct ventilation openings of the product. Keep the

minimum clearance as follows for ventilation and an access to the power plug. Unplug the product if an abnormal condition is noted.

- Ventilate well during extended operation or mass copying. It may affect the office air environment due to odor such as ozone in a poorly ventilated room. Provide proper ventilation to ensure the comfortable and safe environment.
- Connect this product to the LAN connection which is not subjected to over voltages.
- IT Power system (For Norway Only)

This product is also designed for IT power system with phase to phase voltage 230V.



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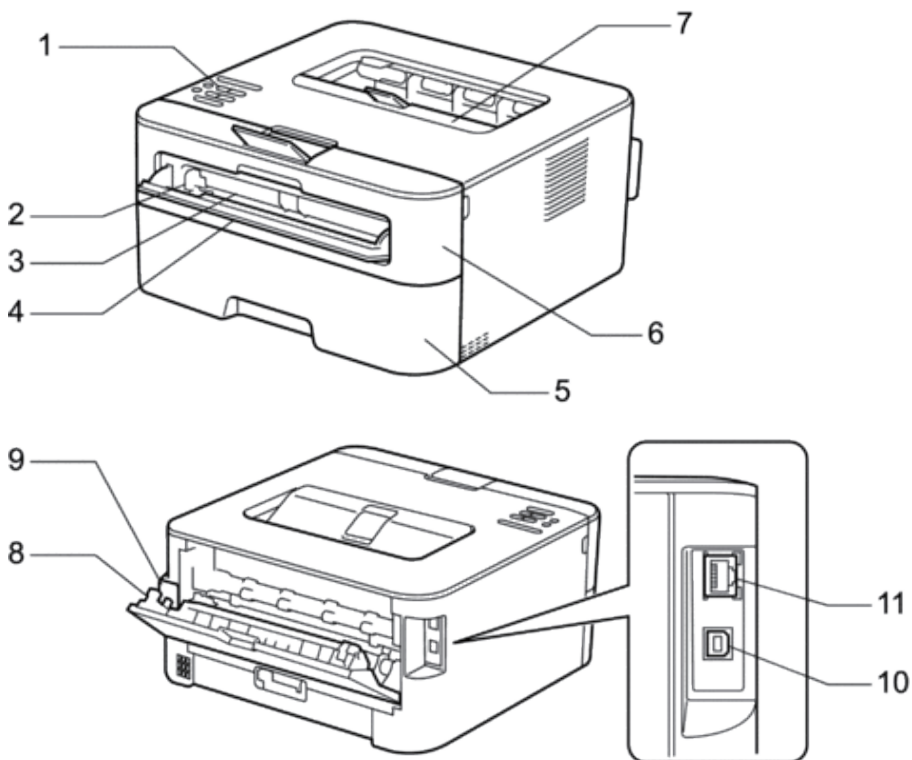
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# Introduction to Your Dell Machine

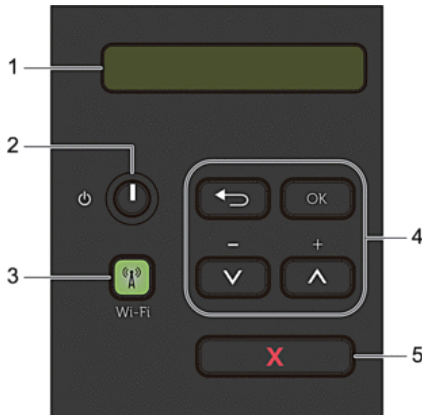
- Front View and Back View
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## Front View and Back View



1. Control panel
2. Manual feed paper guide
3. Manual feed slot
4. Manual feed slot cover
5. Paper tray
6. Front cover
7. Face-down output tray
8. Back cover (Face-up output tray)
9. AC power connector
10. USB port
11. Network port

# Control Panel Overview



## 1. LCD (Liquid Crystal Display)

Displays messages to help you set up and use your machine.

A four-level indicator shows the wireless signal strength if you are using a wireless connection.



## 2. Power On/Off Button

- Turn on the machine by pressing .
- Turn off the machine by pressing and holding . The LCD displays *Shutting Down* for a few seconds before going off.

## 3. Network Button

### Wi-Fi

Press the **Wi-Fi** button and launch the wireless installer on your computer. Follow the on-screen instructions to set up a wireless connection between your machine and your network.

When the **Wi-Fi** light is on, your Dell machine is connected to a wireless access point. When the **Wi-Fi** light blinks, the wireless connection is down, or your machine is in the process of connecting to a wireless access point.

## 4. Menu Buttons

### OK

Press to store your machine settings. After you change a setting, the machine returns to the previous menu level.

### Back

- Press to go back one level in the menu.
- Press to select the previous digit when setting numbers.

### ▲ or ▼ ( + or - )

- Press to scroll through menus and options.
- Press to enter a number or to increase or decrease the number. Hold down ▲ or ▼ to scroll faster. When you see the number you want, press **OK**.


## 5. X (Cancel) Button

- Press to clear certain error messages. To clear all other errors, follow the control panel instructions.
- Press to print any data remaining in the machine's memory.
- Press and hold **X (Cancel)** for about two seconds to cancel a print job.

## Status Messages

Machine Status Message	Meaning
Cooling Down	The machine is cooling down. Wait for a few seconds until the inside of the machine has cooled down.
Cancel Printing	The machine is canceling the job.
Please Wait	The machine is warming up.
Printing	The machine is printing.
Ready	The machine is ready to print.
Sleep	In Sleep Mode (Power Save Mode), the machine acts as if it is turned off, but it can still receive data. Receiving a print job will wake the machine and it will start printing.
Deep Sleep	In Deep Sleep Mode (lower power consumption than Sleep Mode), the machine acts as if it is turned off, but it can still receive data. If the machine does not receive data for a certain length of time while it is in Sleep Mode, it enters Deep Sleep Mode. Receiving a print job will wake the machine and it will start printing.

## Dell Printer Hub (Windows® Only)

This software allows you to print documents with cloud services. It also notifies you of the firmware/software updates, printer status and toner level. For more information, open the program and click  on the top right of the main window to see the FAQs.



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## Paper Handling

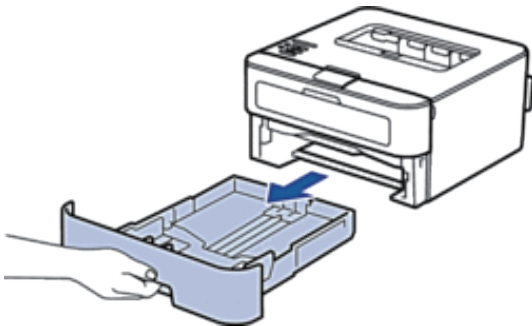
- Load and Print using the Paper Tray
- Load and Print Paper in the Manual Feed Slot
- Set the Check Size  
Your Dell machine's Check Size setting causes the machine to display a message when you remove the paper tray from the machine, asking if you changed the paper size.
- Unprintable Area
- Using Special Paper  
Always test paper samples before purchasing them to ensure desirable performance.

### Load and Print using the Paper Tray

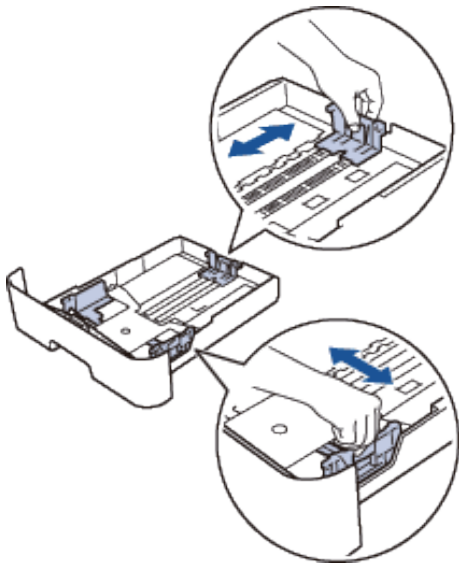
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- If the Check Paper setting is set to On and you pull the paper tray out of the machine, a message appears on the LCD asking if you want to change the paper type and paper size. Change the paper size and paper type settings if needed, following the on-screen instructions.
  - When you load a different paper size in the tray, you must change the paper size setting in the machine or on your computer at the same time.
- 

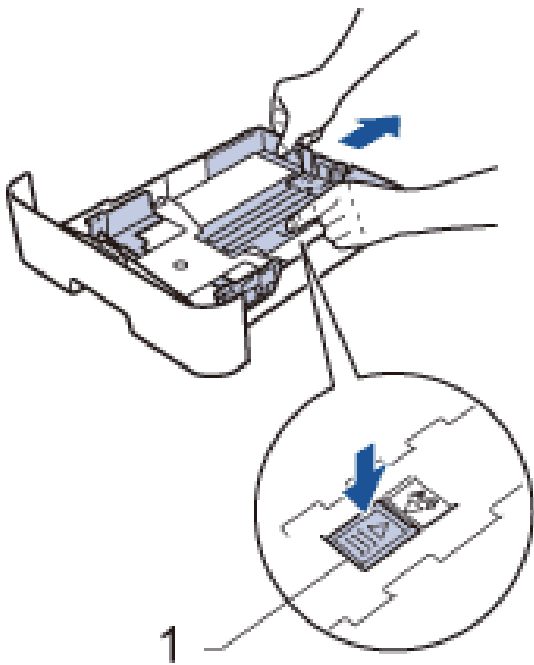
1. Pull the paper tray completely out of the machine.



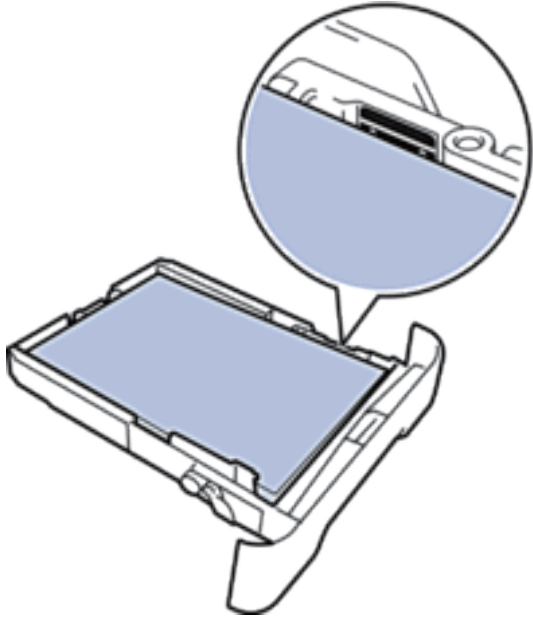
2. Press and slide the paper guides to fit the paper.  
Press the release levers to slide the paper guides.



**NOTE:** For Legal or Folio size paper, press the release button (1) in the bottom of the paper tray and then pull out the back of the paper tray. (Legal and Folio size paper are not available in some regions.)



3. Fan the stack of paper well.
4. Load paper with the printing surface *face down* in the paper tray.  
**NOTE:** DO NOT load different types of paper in the paper tray at the same time. Doing this may cause the paper to jam or misfeed.
5. Make sure the paper is below the "MAX" mark.  
 Overfilling the paper tray will cause paper jams.



6. Slowly push the paper tray completely into the machine.
7. Lift the flap to prevent paper from sliding off the output tray.



8. Send your print job to the machine.

**NOTE:** Change your print preferences in the Print dialog box before sending the print job from your computer.

## Load and Print Paper in the Manual Feed Slot

- Load and Print Plain Paper, Thin Paper, Recycled Paper and Bond Paper in the Manual Feed Slot
- Load and Print on Thick Paper and Labels in the Manual Feed Slot
- Load and Print on Envelopes in the Manual Feed Slot
- Printing Problems
- Error and Maintenance Messages

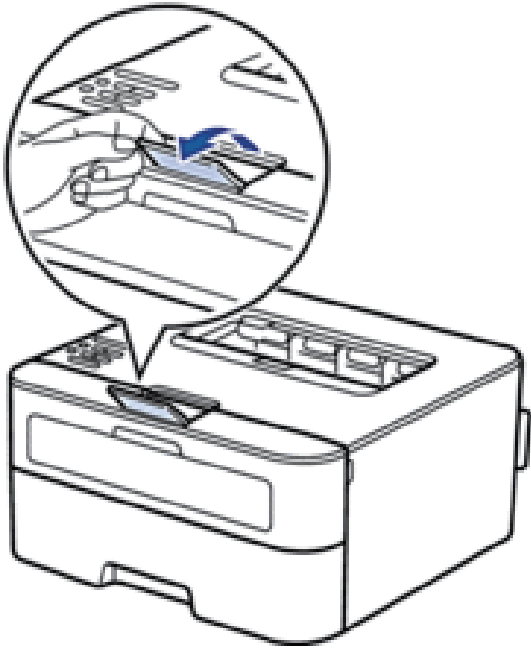
## Load and Print Plain Paper, Thin Paper, Recycled Paper and Bond Paper in the Manual Feed Slot

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When you load a different paper size in the tray, you must change the paper size setting in the machine or on your computer at the same time.

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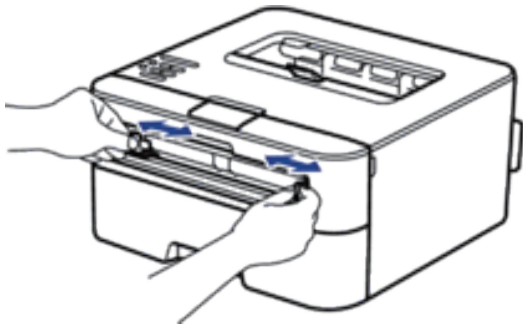
1. Lift the flap to prevent paper from sliding off the face-down output tray.



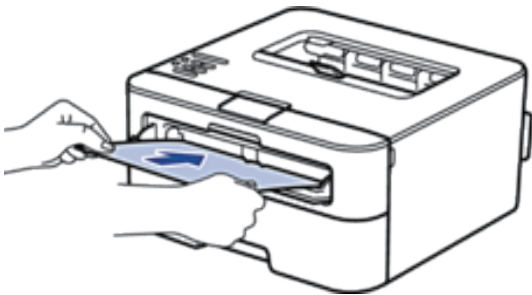
2. Open the manual feed slot cover.



3. Use both hands to slide the manual feed slot paper guides to fit the width of the paper you are using.



4. Using both hands, put one full sheet of paper in the manual feed slot until the front edge touches the paper feed roller. When you feel the machine pull it in, let go.



**NOTE:** Load paper into the manual feed slot with the printing surface facing up.

**NOTE:** Make sure the paper is straight and in the correct position in the manual feed slot. If it is not, the paper may not be fed correctly, resulting in a skewed printout or a paper jam.

5. Send your print job to the machine.

**NOTE:** Change your print preferences in the Print screen before sending the print job from your computer.

6. After the printed page comes out from the back of the machine, load the next sheet of paper in the manual feed slot. Repeat for each page that you want to print.

## Load and Print on Thick Paper and Labels in the Manual Feed Slot

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When you load a different paper size in the tray, you must change the paper size setting in the machine or on your computer at the same time.

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1. Open the machine's back cover (the face-up output tray).

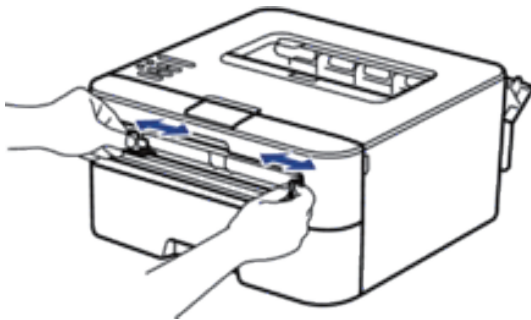


**NOTE:** The machine automatically turns on Manual Feed mode when you load paper in the manual feed slot.

2. On the front of the machine, open the manual feed slot cover.



3. Use both hands to slide the manual feed slot paper guides to fit the width of the paper that you are using.



4. Using both hands, put one full sheet of paper in the manual feed slot until the front edge touches the paper feed roller. When you feel the machine pull it in, let go.



**NOTE:** Load paper into the manual feed slot with the printing surface facing up.

**NOTE:** Pull the paper out completely if you must reload the paper into the manual feed slot.

**NOTE:** Do not put more than one sheet of paper in the manual feed slot at one time, as it may cause a jam.

**NOTE:** Make sure the paper is straight and in the correct position in the manual feed slot. If it is not, the paper may not be fed correctly, resulting in a skewed printout or a paper jam.

5. Send your print job to the machine.

**NOTE:** Change your print preferences in the Print screen before sending the print job from your computer.

6. After the printed page comes out from the back of the machine, load the next sheet of paper in the manual feed slot. Repeat for each page that you want to print.
7. Close the back cover (the face-up output tray) until it locks in the closed position.

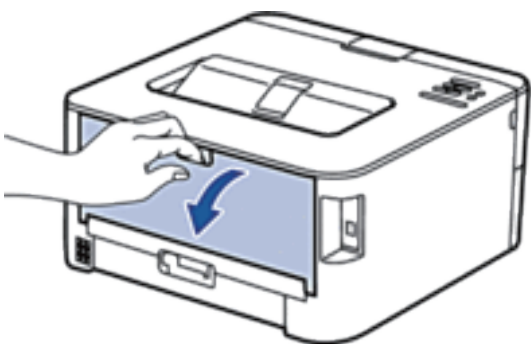
## Load and Print on Envelopes in the Manual Feed Slot

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When you load a different paper size in the tray, you must change the paper size setting in the machine or on your computer at the same time.

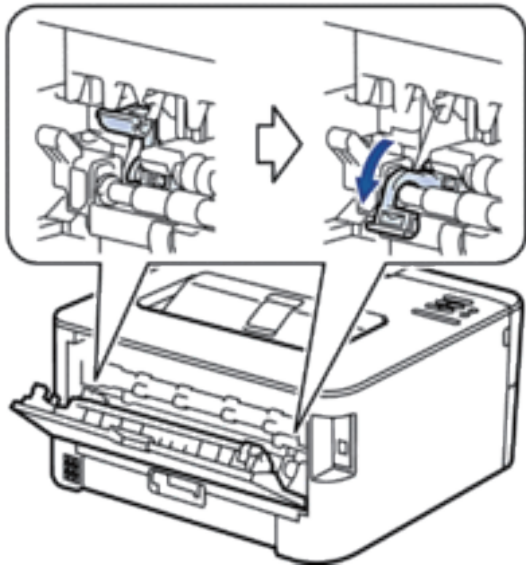
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1. Open the machine's back cover (the face-up output tray).



**NOTE:** The machine automatically turns on Manual Feed mode when you load paper in the manual feed slot.

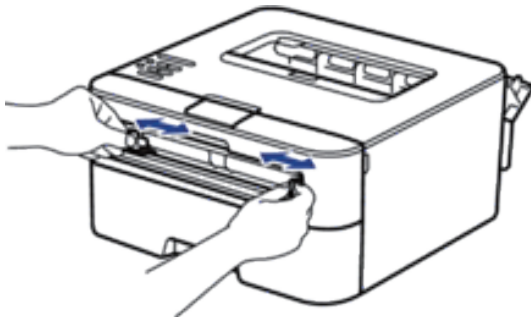
2. Pull down the two levers, one on the left side and one on the right side, as shown in the illustration.



3. On the front of the machine, open the manual feed slot cover.



4. Use both hands to slide the manual feed slot paper guides to fit the width of the paper that you are using.



5. Using both hands, put one envelope in the manual feed slot until the front edge touches the paper feed roller. When you feel the machine pull it in, let go.





**NOTE:** Load the envelope into the manual feed slot with the printing surface facing up.

**NOTE:** Pull the envelope out completely when you reload the envelope into the manual feed slot.

**NOTE:** Do not put more than one envelope in the manual feed slot at one time, as it may cause a jam.

**NOTE:** Make sure the envelope is straight and in the correct position on the manual feed slot. If it is not, the envelope may not be fed correctly, resulting in a skewed printout or a paper jam.

- Send your print job to the machine.

**NOTE:** Change your print preferences in the Print dialog box before sending the print job from your computer.

Settings	Options for Envelopes
Paper Size	Com-10
	DL
	C5
	Monarch
Media Type	Envelopes
	Env. Thick
	Env. Thin

- After the printed envelope comes out of the machine, put in the next envelope. Repeat for each envelope that you want to print.
- When you have finished printing, return the two levers that you adjusted in former step back to their original positions.
- Close the back cover (the face-up output tray) until it locks in the closed position.

## Set the Check Size

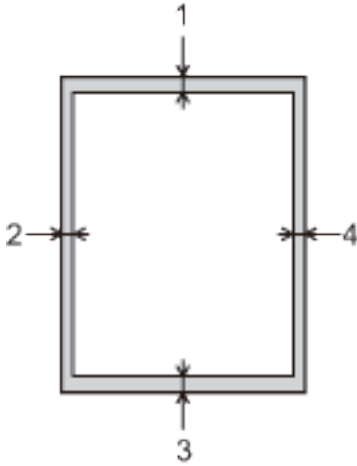
Your Dell machine's Check Size setting causes the machine to display a message when you remove the paper tray from the machine, asking if you changed the paper size.

The default setting is On.

- Press ▲ or ▼ to select the Paper Tray option, and then press **OK**.
- Press ▲ or ▼ to select the Check Size option, and then press **OK**.
- Press ▲ or ▼ to select the On or Off option, and then press **OK**.

## Unprintable Area

The figures below show maximum unprintable areas from the edges of the most commonly-used paper sizes. The measurements may vary depending on the paper size or settings in the application you are using.



**NOTE:** Do not attempt to print into these areas; your output will not reflect anything in these areas.

Usage	Document Size	Top (1) Bottom (3)	Left (2) Right (4)
Print	Letter	0.16 in. (4.23 mm)	0.16 in. (4.23 mm)
	A4	0.16 in. (4.23 mm)	0.16 in. (4.23 mm)

## Using Special Paper

Always test paper samples before purchasing them to ensure desirable performance.

- DO NOT use inkjet paper; it may cause a paper jam or damage your machine.
- If you use bond paper, paper with a rough surface, or paper that is wrinkled or creased, the paper may exhibit degraded performance.

### Types of paper to avoid

#### IMPORTANT

Some types of paper may not perform well or may cause damage to your machine.

DO NOT use paper:

- that is highly textured
- that is extremely smooth or shiny
- that is curled or warped
- that is coated or has a chemical finish
- that is damaged, creased or folded
- that exceeds the recommended weight specification in this guide
- with tabs and staples

- with letterheads using low temperature dyes or thermography
- that is multipart or carbonless
- that is designed for inkjet printing

If you use any of the types of paper listed above, they may damage your machine. This damage is not covered under any Dell warranty or service agreement.



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# Print

- Before Printing
- Print from Your Computer (Windows®)
- Print from Your Computer (Macintosh)
- Adjust Print Settings from the Machine's Control Panel

## Before Printing

Before attempting any printing operation, confirm the following:

- Make sure you have installed the printer driver.
- The instructions for printer driver are described based on PCL driver. Since the XPS printer driver is installed as the default printer driver for Windows®8, the function may vary from the instructions on this user guide.
- For USB or network cable users: Make sure the interface cable is physically secure.

### Firewall (Windows®)

If your computer is protected by a firewall and you are unable to network print, you may need to configure the firewall settings. If you are using the Windows®Firewall and you installed the printer driver from the CD-ROM, the necessary firewall settings have already been set. If you are using any other personal firewall software, see the User's Guide for your software or contact the software manufacturer.

## Print from Your Computer (Windows®)

- Basic Printing Methods (Windows®)
- Advanced Printing Methods (Windows®)
- Select a Print Profile (Windows®)

**Print Profiles** are presets designed to give you quick access to frequently-used printing configurations.

- Change the Default Print Settings (Windows®)

When you change print settings from within a program, the changes apply only to the items you are printing in that program, at that time. To select print settings to use for all of your Windows®programs, all the time, use these steps to change the default print settings.

### Basic Printing Methods (Windows®)

- Print a Document (Windows®)
  - Print Preview (Windows®)
  - Change the Paper Size (Windows®)
- The Paper Size options offer a large selection of standard paper sizes.
- Change the Orientation of Your Print (Portrait or Landscape) (Windows®)
  - Print Multiple Copies of the Same Document (Windows®)
  - Change the Media Type (Windows®)

To achieve the best print results, the media being printed on should be selected in the driver. The machine changes the way it prints depending on the selected media type.

- Change the Resolution (Windows®)

You can choose the print resolution. As print resolution and speed are related, the higher the resolution, the longer it will take to print the document.

- **Change the Print Settings (Windows®)**

The Print Settings selection lets you choose the print resolution. As print quality and speed are related, the higher the quality, the longer it takes to print the document.

- **Improve Gray Printing (Windows®)**

You can improve the image quality of a shaded area.

- **Improve Pattern Printing (Windows®)**

You can improve the pattern printing if printed fills and patterns are different from the fills and patterns you see on your computer screen.

- **Improve Thin Line (Windows®)**

Use this option to improve the image quality of thin lines.

- **Print More Than One Page on a Single Sheet of Paper (N in 1) (Windows®)**

- **Print as a Poster (Windows®)**

Enlarge your print size and print the document in poster mode.

- **Print on Both Sides of the Paper (Windows®)**

- **Print as a Booklet (Windows®)**

Use this option to print a document in booklet format using 2-sided printing. The document's pages will be arranged according to the correct page number and will allow you to fold the print output at the center and read the booklet pages numerically, without having to change the order of the printed pages.

- **Change the Paper Source (Windows®)**

Select a paper source setting that matches your print conditions or purpose.

## **Print a Document (Windows®)**

1. Select the print command in your application.

2. Select **Dell Printer E310dw**, and then click the printing properties or preferences button.

The printer driver window appears.

3. Make sure you have loaded the correct size paper in the paper tray.

4. Click the **Paper Size** drop-down list, and then select your paper size.

5. Click the **Portrait** or **Landscape** option to set the orientation of your printout.

**NOTE:** If your application software contains a similar layout feature, we recommend using the one in the application.

6. Type the number of copies (1-999) you want in the **Copies** field.

7. Click the **Media Type** drop-down list, and then select the type of paper you are using.

8. To print multiple pages on a single sheet of paper or print one page of your document on multiple sheets, click the **Multiple Page** drop-down list, and then select your options.

9. Change other printer settings if needed.

10. Click **OK**.

11. Complete your print operation.



## Print Preview (Windows®)



1. Select the print command in your application.
2. Select **Dell Printer E310dw**, and then click the printing properties or preferences button.  
The printer driver window appears.
3. Select the **Print Preview** check box.
4. Change other printer settings if needed.
5. Click **OK**.
6. Click the proceed or next button in your application dialog box.  
The **PrintPreview** viewer opens before printing starts.
7. Select the page(s) you want to print from the list in the **Print Page** field.  
The print results will be displayed in the preview area. By default, all pages are selected. To print only some pages, clear the check boxes for the pages you do not want to print.  
**NOTE:** If the **2-sided / Booklet** setting is selected in the printer driver, you cannot select the **Print Page** check box.
8. Click **File** , and then click **Print** to start printing.

## Change the Paper Size (Windows®)

The Paper Size options offer a large selection of standard paper sizes.

1. Select the print command in your application.
2. Select **Dell Printer E310dw**, and then click the printing properties or preferences button.  
The printer driver window appears.
3. Click the **Paper Size** drop-down list, and then select your paper size.
4. Click **OK**.
5. Complete your print operation.

## Create a Custom Paper Size (Windows®)

1. Do one of the following:
  - (For Windows Server®2003)  
Click **Start > Printers and Faxes**.
  - (For Windows Vista®and Windows Server®2008)  
Click  **(Start) > Control Panel > Hardware and Sound > Printers**.
  - (For Windows®7 and Windows Server®2008 R2)  
Click  **(Start) > Devices and Printers**.
  - (For Windows®8)  
Move your mouse to the lower right corner of your desktop. When the menu bar appears, click **Settings** , and then click **Control Panel**. In the **Hardware and Sound** group, click **View devices and printers**.
  - (For Windows Server®2012)

Move your mouse to the lower right corner of your desktop. When the menu bar appears, click **Settings** , and then click **Control Panel**. In the **Hardware** group, click **View devices and printers**.

- (For Windows Server®2012 R2)

Click **Control Panel** on the **Start** screen. In the **Hardware** group, click **View devices and printers**.

2. Right-click the **Dell Printer E310dw** icon, and then select **Printer properties**. If printer driver options appear, select your printer driver.
3. Click the **General** tab, and then click the **Printing Preferences...** or **Preferences...** button.  
The printer driver dialog box appears.  
**NOTE:** To configure the tray settings, click the **Device Settings** tab.  
**NOTE:** To change the printer port, click the **Ports** tab.
4. Click the **Paper Size** drop-down list, and then select **User Defined**.
5. Type a name for this custom size in the **Custom Paper Size Name** field.
6. Specify the **Width** and **Height** values.
7. Click **Save**.
8. Click **OK**.
9. Click **OK**.
10. Close the printer properties dialog box.

### Change the Orientation of Your Print (Portrait or Landscape) (Windows®)



1. Select the print command in your application.
2. Select **Dell Printer E310dw**, and then click the printing properties or preferences button.  
The printer driver window appears.
3. Click the **Portrait** or **Landscape** option to set the orientation of your printout.  
**NOTE:** If your application software contains a similar layout feature, we recommend using the one in the application.
4. Click **OK**.
5. Complete your print operation.

## Print Multiple Copies of the Same Document (Windows®)

1. Select the print command in your application.
2. Select **Dell Printer E310dw**, and then click the printing properties or preferences button.  
The printer driver window appears.
3. Type the number of copies (1-999) you want in the **Copies** field.
4. Select the **Collate** check box, if needed.

### Collate

When the **Collate** check box is selected, one complete copy of your document will be printed, and then reprinted according to the number of copies you choose. If the **Collate** check box is not selected, then each page will be printed according to the number of copies chosen before the next page of the document is printed.

5. Change other printer settings if needed.
6. Click **OK**.
7. Complete your print operation.

## Change the Media Type (Windows®)

To achieve the best print results, the media being printed on should be selected in the driver. The machine changes the way it prints depending on the selected media type.

1. Select the print command in your application.
2. Select **Dell Printer E310dw**, and then click the printing properties or preferences button.  
The printer driver window appears.
3. Click the **Media Type** drop-down list, and then select the media type you want to use.

Select this Media Type	For this paper
Plain Paper	Ordinary plain paper
Thin Paper	Ordinary thin paper
Thick Paper	Rough paper or thicker paper
Thicker Paper	Select this option if you have selected <b>Thick Paper</b> , and toner smudges while printing.
Bond Paper	Bond paper
Envelopes	Envelopes
Env. Thick	Select this option if the toner does not correctly stick to the envelope when the <b>Envelopes</b> option is selected.
Env. Thin	Select this option if the envelope is crumpled when the <b>Envelopes</b> option is selected.
Recycled Paper	Recycled paper
Label	Label

4. Click **OK**.
5. Complete your print operation.

## Change the Resolution (Windows®)

You can choose the print resolution. As print resolution and speed are related, the higher the resolution, the longer it will take to print the document.

1. Select the print command in your application.
2. Select **Dell Printer E310dw**, and then click the printing properties or preferences button.  
The printer driver window appears.
3. Click the **Resolution** drop down list and click the print resolution you want to use.
  - **300 dpi**
  - **600 dpi**
  - **HQ 1200**
4. Click **OK**.
5. Complete your print operation.

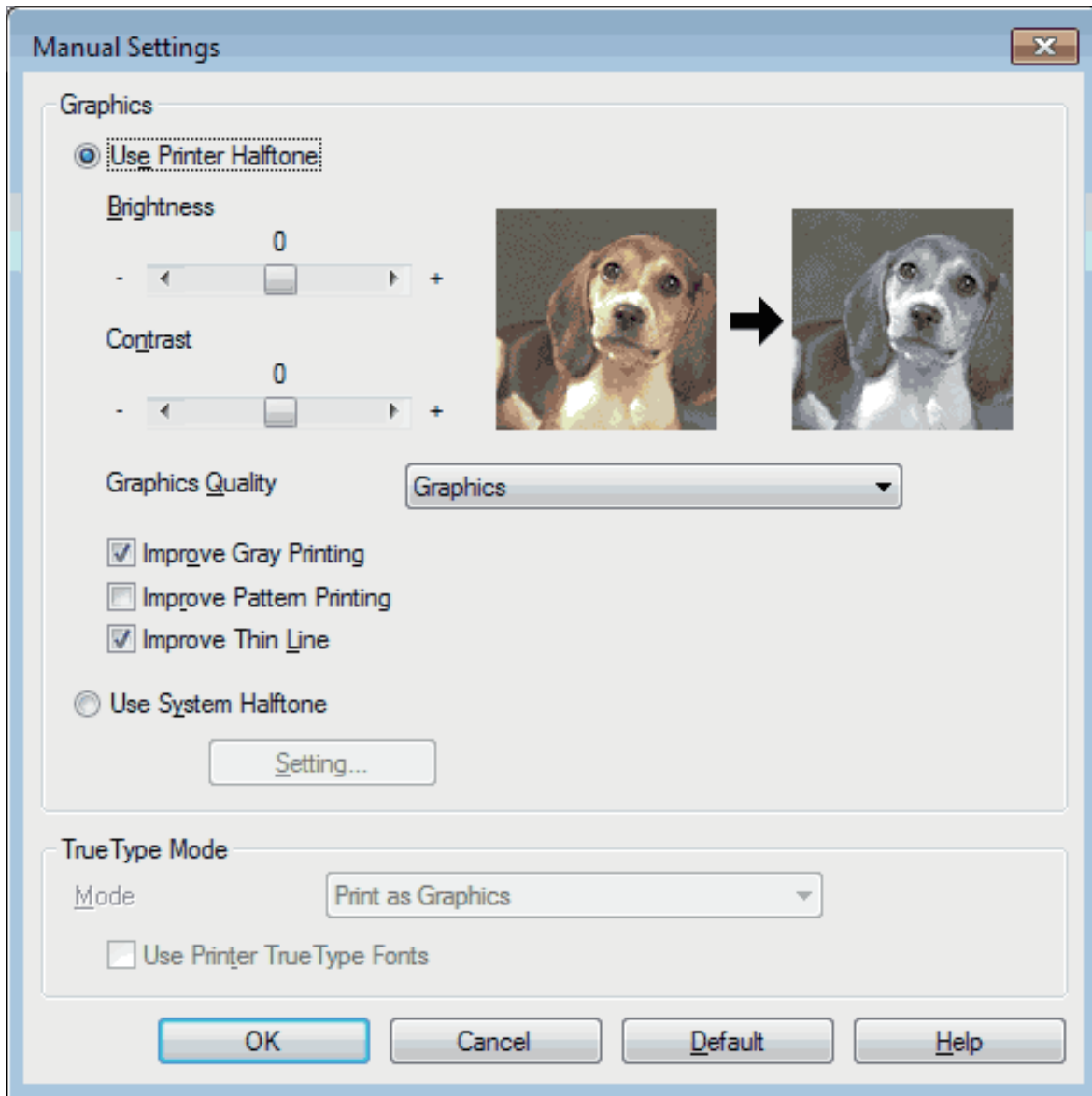
## Change the Print Settings (Windows®)

The Print Settings selection lets you choose the print resolution. As print quality and speed are related, the higher the quality, the longer it takes to print the document.

1. Select the print command in your application.
2. Select **Dell Printer E310dw**, and then click the printing properties or preferences button.  
The printer driver window appears.
3. Click the **Print Settings** drop down list and click the print settings you want to use.

Option	Description
Graphics	This is the best mode for printing documents that contain graphics.
Text	This is the best mode for printing text documents.
Manual	You can change the advanced settings manually.

4. To change more advanced settings such as brightness, contrast, and other settings, select **Manual** and click **Manual Settings....**



5. Click **OK**.
6. Complete your print operation.

### **Improve Gray Printing (Windows®)**

You can improve the image quality of a shaded area.

1. Select the print command in your application.
2. Select **Dell Printer E310dw**, and then click the printing properties or preferences button.  
The printer driver window appears.
3. Click the **Print Settings** drop-down list, select **Manual**, and then click the **Manual Settings...** button.
4. Select the **Improve Gray Printing** check box.

5. Click **OK** to return to the printer driver window.
6. Click **OK**.
7. Complete your print operation.

### **Improve Pattern Printing (Windows®)**

You can improve the pattern printing if printed fills and patterns are different from the fills and patterns you see on your computer screen.

1. Select the print command in your application.
2. Select **Dell Printer E310dw**, and then click the printing properties or preferences button.  
The printer driver window appears.
3. Click the **Print Settings** drop-down list, select **Manual** , and then click the **Manual Settings...** button.
4. Select the **Improve Pattern Printing** check box.
5. Click **OK** to return to the printer driver window.
6. Click **OK**.
7. Complete your print operation.

### **Improve Thin Line (Windows®)**

Use this option to improve the image quality of thin lines.

1. Select the print command in your application.
2. Select **Dell Printer E310dw**, and then click the printing properties or preferences button.  
The printer driver window appears.
3. Click the **Print Settings** drop-down list, select **Manual** , and then click the **Manual Settings...** button.
4. Confirm that the **Improve Thin Line** check box is selected.
5. Click **OK** to return to the printer driver window.
6. Click **OK**.
7. Complete your print operation.

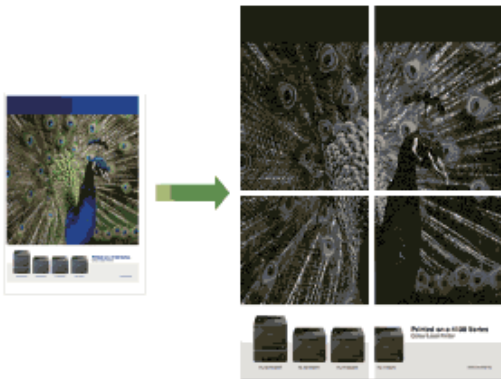
## Print More Than One Page on a Single Sheet of Paper (N in 1) (Windows®)



1. Select the print command in your application.
2. Select **Dell Printer E310dw**, and then click the printing properties or preferences button.  
The printer driver window appears.
3. Click the **Portrait** or **Landscape** option to set the orientation of your printout.  
**NOTE:** If your application software contains a similar layout feature, we recommend using the one in the application.
4. Click the **Multiple Page** drop-down list, and then select the **2 in 1** , **4 in 1** , **9 in 1** , **16 in 1** , or **25 in 1** option.
5. Click the **Page Order** drop-down list, and then select your page order.
6. Click the **Border Line** drop-down list, and then select your border line type.
7. Change other printer settings if needed.
8. Click **OK**.
9. Complete your print operation.

## Print as a Poster (Windows®)

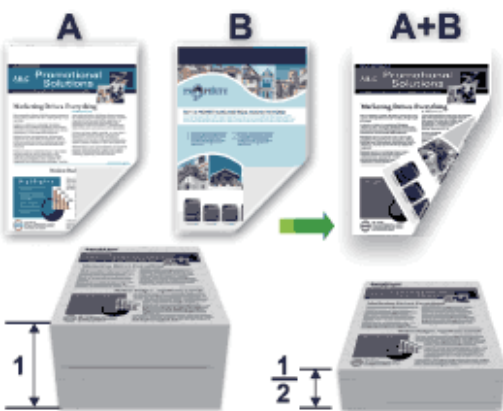
Enlarge your print size and print the document in poster mode.



1. Select the print command in your application.

2. Select **Dell Printer E310dw**, and then click the printing properties or preferences button.  
The printer driver window appears.
3. Click the **Multiple Page** drop-down list, and then select the **1 in 2x2 Pages** , **1 in 3x3 Pages** , **1 in 4x4 Pages** , or **1 in 5x5 Pages** option.
4. Select the **Print cut-out line** check box, if needed.  
**Print cut-out line**  
Prints a faint cut-out line around the printable area so that you can easily cut it out.
5. Change other printer settings if needed.
6. Click **OK**.
7. Complete your print operation.

### Print on Both Sides of the Paper (Windows®)



- 
- Select Letter, Legal, or Folio sized paper when using the automatic 2-sided printing function.
  - Make sure the back cover is closed.
  - If paper is curled, straighten it and put it back in the paper tray.
  - Use regular paper or thin paper. **DO NOT** use bond paper.
  - If the paper is too thin, it may wrinkle.
  - When you use the manual 2-sided printing function, it is possible there may be paper jams or poor print quality.
- 

1. Select the print command in your application.
2. Select **Dell Printer E310dw**, and then click the printing properties or preferences button.  
The printer driver window appears.
3. Click the **Portrait** or **Landscape** option to set the orientation of your printout.  
**NOTE:** If your application software contains a similar layout feature, we recommend using the one in the application.
4. Click the **2-sided / Booklet** drop-down list, and then select the **2-sided** or **2-sided (Manual)** option.

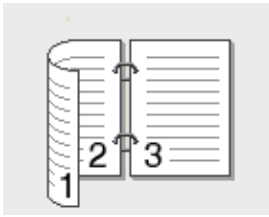
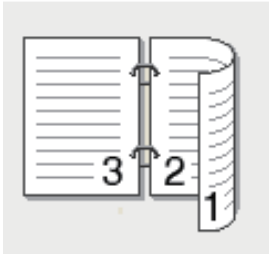
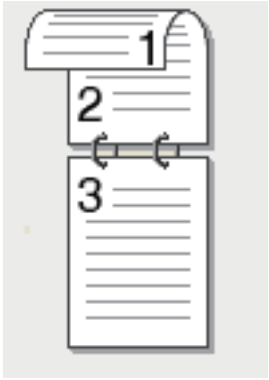


Option	Description
<b>2-sided (available only for certain models)</b>	Automatically prints on both sides of the paper.
<b>2-sided (Manual)</b>	The machine prints all the even-numbered pages on one side of the paper first. Then, the printer driver instructs you (with a pop-up message) to reinsert the paper.

5. Click the **2-sided Settings** button.

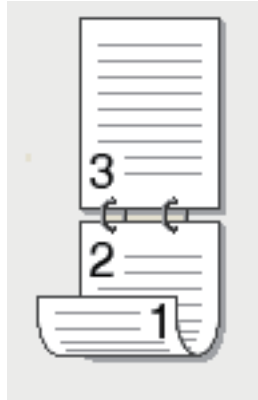
6. Select one of the options from the **2-sided Type** menu.

When 2-sided is selected, four types of 2-sided binding are available for each orientation:

Option for Portrait	Description
Long Edge (Left)	
Long Edge (Right)	
Short Edge (Top)	

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Short Edge (Bottom)

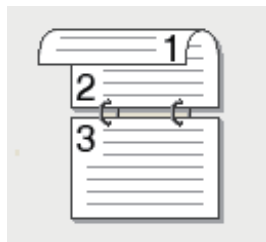


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**Option for Landscape**

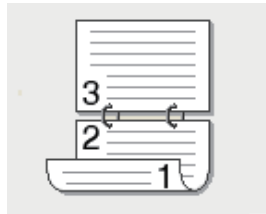
**Description**

Long Edge (Top)



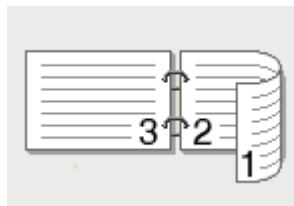
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Long Edge (Bottom)



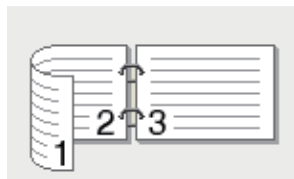
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Short Edge (Right)



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Short Edge (Left)



- 
7. Select the **Binding Offset** check box if you want to specify the offset for binding in inches or millimeters.
  8. Change other printer settings if needed.
  9. Click **OK**.
  10. Do one of the following:

- For automatic 2-sided printing, click **OK** again, and then complete your print operation.
- For manual 2-sided printing, click **OK** again and follow the screen instructions.

If the paper is not feeding correctly, it may be curled. Remove the paper, straighten it, and put it back in the paper tray.

### Print as a Booklet (Windows®)

Use this option to print a document in booklet format using 2-sided printing. The document's pages will be arranged according to the correct page number and will allow you to fold the print output at the center and read the booklet pages numerically, without having to change the order of the printed pages.



- 
- Select Letter, Legal, or Folio sized paper when using the automatic 2-sided printing function.
  - Make sure the back cover is closed.
  - If paper is curled, straighten it and put it back in the paper tray.
  - Use regular paper or thin paper. DO NOT use bond paper.
  - If the paper is too thin, it may wrinkle.
  - When you use the manual 2-sided printing function, it is possible there may be paper jams or poor print quality.
- 

1. Select the print command in your application.
2. Select **Dell Printer E310dw**, and then click the printing properties or preferences button.  
The printer driver window appears.
3. Click the **Portrait** or **Landscape** option to set the orientation of your printout.

**NOTE:** If your application software contains a similar layout feature, we recommend using the one in the application.



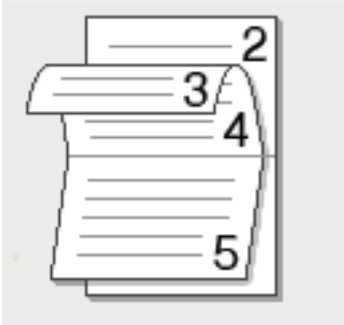
4. Click the **2-sided / Booklet** drop-down list, and then select the **Booklet** or **Booklet (Manual)** option.

Option	Description
Booklet (available only for certain models)	Automatically prints as a booklet.
Booklet (Manual)	Manually prints as a booklet.

5. Click the **2-sided Settings** button.



6. Select the one of the options from the **2-sided Type** menu.

There are two types of 2-sided binding directions available for each orientation:

Option for Portrait	Description
Left Binding	
Right Binding	
Option for Landscape	Description
Top Binding	



**7. Select one of the options from the **Booklet Printing Method** menu.**

<b>Option</b>	<b>Description</b>
All Pages at Once	Every page will be printed in booklet format (four pages to every piece of paper, two pages per side). Fold your printout in the middle to create the booklet. 
Divide into Sets	This option prints the whole booklet in smaller individual booklet sets, allowing you to fold at the center of the smaller individual booklet sets without having to change the order of the printed pages. You can specify the number of sheets in each smaller booklet set (from 1-15). This option can be helpful when folding a printed booklet that has a large number of pages. 

**8. Select the **Binding Offset** check box if you want to specify the offset for binding in inches or millimeters.**

**9. Change other printer settings if needed.**

**10. Click **OK**.**

**11. Do one of the following:**

- For automatic booklet printing, click **OK** again, and then complete your print operation.
- For manual booklet printing, click **OK** again and follow the screen instructions.

### **Change the Paper Source (Windows®)**

Select a paper source setting that matches your print conditions or purpose.

**1. Select the print command in your application.**

**2. Select **Dell Printer E310dw**, and then click the printing properties or preferences button.**

The printer driver window appears.

**3. Click the **First Page** and **Other Pages** drop-down lists to select your paper tray from each list.**

Option	Description
Auto Select	The machine will automatically select the tray to use if the paper type and paper size configured on the machine match the printer driver settings. The paper size and paper type for each tray must be configured correctly on the machine.
Tray1	The machine will exclusively use tray #1 when printing.
Manual	The machine will exclusively use the Manual Feed Slot when printing.

**NOTE:** You can specify different trays for printing the first page of your document and for printing from the second page onwards.

4. Click **OK**.

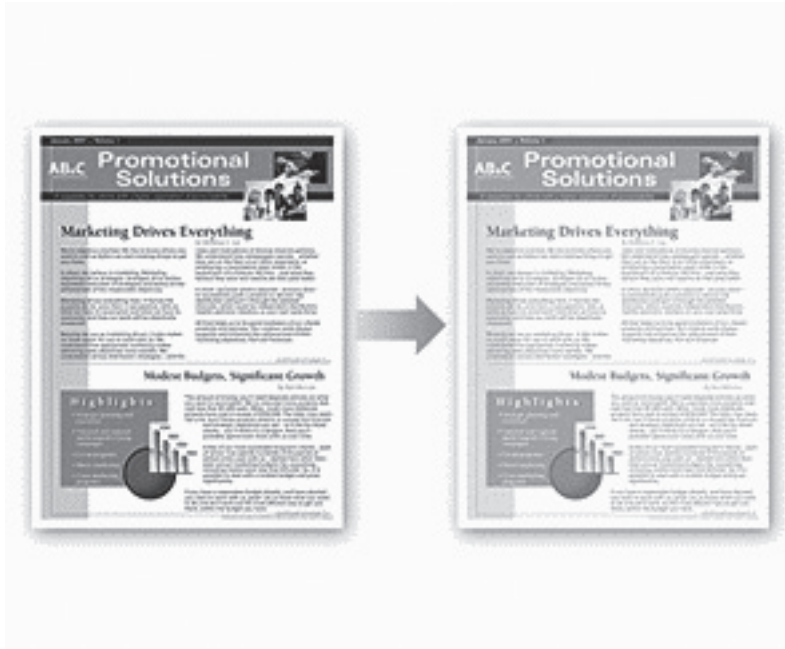
5. Complete your print operation.

## Advanced Printing Methods (Windows®)

- **Print in Toner Save Mode (Windows®)**  
This feature conserves your toner by using less toner to print documents; print appears lighter, but is still readable.
- **Scaled Print (Windows®)**  
This option lets you enlarge or reduce the pages in your document to fit your printed paper size.
- **Reverse Print (Windows®)**  
This setting rotates the printed image 180 degrees.
- **Add a Watermark to the Printed Document (Windows®)**  
Print a logo or text onto your document as a watermark. Select one of the preset watermarks, add a new watermark, or use an image file you have created.
- **Print the Date, Time and PC Login User Name on the Document (Header-Footer Print) (Windows®)**
- **Use a Macro from Your Computer (Windows®)**  
If you have stored the electronic forms (macros) in your machine's memory, you can use the macro to print the data as an overlay on the print job you want.
- **Adjust the Print Density (Windows®)**  
You can increase or decrease the print density.
- **Reduce Paper Curl (Windows®)**
- **Improve Toner Fixing (Windows®)**
- **Skip Blank Page (Windows®)**  
Use this option to allow the printer driver to automatically detect blank pages and exclude them from printing.
- **Print Text in Black (Windows®)**  
Use this option when you want to print color text in black.
- **Save an Archive File of the Print Data (Windows®)**  
Print data can be saved as a PDF file to your computer.

## Print in Toner Save Mode (Windows®)

This feature conserves your toner by using less toner to print documents; print appears lighter, but is still readable.



**NOTE:** We do not recommend using this mode for printing photo or grayscale images.

1. Select the print command in your application.
2. Select **Dell Printer E310dw**, and then click the printing properties or preferences button.  
The printer driver window appears.
3. Click the **Advanced** tab.
4. Select the **Toner Save Mode** check box.
5. Change other printer settings if needed.
6. Click **OK**.
7. Complete your print operation.

## Scaled Print (Windows®)

This option lets you enlarge or reduce the pages in your document to fit your printed paper size.

1. Select the print command in your application.
2. Select **Dell Printer E310dw**, and then click the printing properties or preferences button.  
The printer driver window appears.
3. Click the **Advanced** tab.
4. Do one of the following:
  - Select the **Fit to Paper Size** option to enlarge or reduce the document to fit your printed paper size, and then select the paper size from the drop-down list.
  - Select the **Free** option to enlarge or reduce the document's page size manually, and then type a value into the

field.

5. Change other printer settings if needed.
6. Click **OK**.
7. Complete your print operation.

### **Reverse Print (Windows®)**

This setting rotates the printed image 180 degrees.



1. Select the print command in your application.
2. Select **Dell Printer E310dw**, and then click the printing properties or preferences button.  
The printer driver window appears.
3. Click the **Advanced** tab.
4. Select the **Reverse Print** check box.
5. Change other printer settings if needed.
6. Click **OK**.
7. Complete your print operation.

### **Add a Watermark to the Printed Document (Windows®)**

Print a logo or text onto your document as a watermark. Select one of the preset watermarks, add a new watermark, or use an image file you have created.

1. Select the print command in your application.
2. Select **Dell Printer E310dw**, and then click the printing properties or preferences button.  
The printer driver window appears.
3. Click the **Advanced** tab.
4. Select the **Use Watermark** check box, and then click the **Settings** button.
5. Select the watermark you want to use from the **Select Watermark** list, or create a new watermark.
  - To create a new watermark, click **Add**.
    - a. Select either the **Use Text** or **Use Image File** option in the **Watermark Style** field.
    - b. Type a title for the watermark in the **Title** field.
    - c. If you select the **Use Text** option:
      - Select your **Text**, **Font**, **Style**, **Size** and **Darkness** options.



d.If you select the **Use Image File** option:

- Type the file name and location of your image in the **File** field or click the **Browse** button to search for the file.
- Once an image selected, you can scale the size of the image.

e.To move the position of the watermark on the page, adjust it in the **Position** field.

- To modify an existing watermark, select the watermark, and then click the **Settings** button.

### **Bring To Front**

This option will overlay the watermark on your printed document.

### **In Outline Text**

Select the **In Outline Text** check box to print only an outline of the watermark. This feature is available only when using a text watermark.

### **Custom Settings**

Select where your watermark will print. Include it on all pages, on the first page only, or on all pages except the first page.

6. Click **OK**.
7. Change other printer settings if needed.
8. Click **OK**.
9. Complete your print operation.

## **Print the Date, Time and PC Login User Name on the Document (Header-Footer Print) (Windows®)**



1. Select the print command in your application.
2. Select **Dell Printer E310dw**, and then click the printing properties or preferences button.  
The printer driver window appears.
3. Click the **Advanced** tab.
4. Select the **Header-Footer Print** check box, and then click the **Settings** button.
5. Select the options you want from the following settings: **Format** , **Position** , **Font** and **Background**.

### **ID Print**

Select your computer login user name or custom text as a header or footer using one of the following methods:

- Select the **Login User Name** option to print your computer login user name.
  - Select the **Custom** option to print the text you enter in the **Custom** field.
6. Click **OK** to return to the printer driver window.
  7. Change other printer settings if needed.
  8. Click **OK**.
  9. Complete your print operation.

### Use a Macro from Your Computer (Windows®)

If you have stored the electronic forms (macros) in your machine's memory, you can use the macro to print the data as an overlay on the print job you want.

1. Select the print command in your application.
2. Select **Dell Printer E310dw**, and then click the printing properties or preferences button.  
The printer driver window appears.
3. Click the **Advanced** tab.
4. Click the **Other Print Options** button.
5. Select **Macro**.
6. Click the **Macro Settings** button.
7. Enter **Macro ID** and **Macro Name** you want to use.
8. Select **Insert Macro Command**.
9. Select the page to overlay the macro data.

Option	Description
All Pages	Lets you insert the macro onto all pages.
Page	Lets you insert the macro onto a specific page. Select this option, and then enter a page number within the range 1 to 255.
Add to Top of Page	Send the macro data to the top of the page.
Add to End of Page	Send the macro data to the bottom of the page.

**NOTE:** When **Booklet** has been selected, the **Page** setting in **Insert Macro Command** is disabled.

10. Click **OK**.
11. Click **OK** to return to the printer driver window.
12. Click **OK**.
13. Complete your print operation.  
The macro data is printed as an overlay.

### Adjust the Print Density (Windows®)

You can increase or decrease the print density.

1. Select the print command in your application.
2. Select **Dell Printer E310dw**, and then click the printing properties or preferences button.

The printer driver window appears.

3. Click the **Advanced** tab.
4. Click the **Other Print Options** button.
5. Select **Density Adjustment**.
6. Clear the **Printer Default** check box.
7. To increase or decrease the print density, move the slide bar to the right or left.
8. Click **OK** to return to the printer driver window.
9. Click **OK**.
10. Complete your print operation.

### Reduce Paper Curl (Windows®)



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If you are printing only a few pages, you do not need to select this setting. If paper curls excessively, we recommend changing the **Media Type** setting in the printer driver to the **Thin Paper** or **Env. Thin** setting.

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**NOTE:** This setting decreases the temperature of the machine's fusing process, which reduces paper curl.

1. Select the print command in your application.
2. Select **Dell Printer E310dw**, and then click the printing properties or preferences button.  
The printer driver window appears.
3. Click the **Advanced** tab.
4. Click the **Other Print Options** button.
5. Select the **Improve Print Output** option from the **Printer Function** list.
6. Select the **Reduce Paper Curl** radio button.
7. Click **OK** to return to the printer driver window.
8. Click **OK**.
9. Complete your print operation.

## Improve Toner Fixing (Windows®)



**NOTE:** This setting increases the temperature of the machine's fusing process, which improves toner's ability to stick to paper.

1. Select the print command in your application.
2. Select **Dell Printer E310dw**, and then click the printing properties or preferences button.  
The printer driver window appears.
3. Click the **Advanced** tab.
4. Click the **Other Print Options** button.
5. Select the **Improve Print Output** option from the **Printer Function** list.
6. Select the **Improve Toner Fixing** radio button.
7. Click **OK** to return to the printer driver window.
8. Click **OK**.
9. Complete your print operation.

If this selection does not provide enough improvement, change the **Media Type** setting in the printer driver to the **Thick Paper** or **Env. Thick** setting.

## Skip Blank Page (Windows®)

Use this option to allow the printer driver to automatically detect blank pages and exclude them from printing.

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This option does not work if the following settings are active:

- **Use Watermark**
  - **Header-Footer Print**
  - **N in 1** or **1 in NxN Pages** in the **Multiple Page** drop-down list
  - **2-sided (Manual)** , **Booklet** , **Booklet (Manual)** and **Binding Offset**.
- 

1. Select the print command in your application.
2. Select **Dell Printer E310dw**, and then click the printing properties or preferences button.  
The printer driver window appears.
3. Click the **Advanced** tab.
4. Click the **Other Print Options** button.

5. Select the **Skip Blank Page** option from the **Printer Function** list.
6. Select the **Skip Blank Page** check box.
7. Click **OK** to return to the printer driver window.
8. Click **OK**.
9. Complete your print operation.

### **Print Text in Black (Windows®)**

Use this option when you want to print color text in black.

**NOTE:** The **Print Text in Black** option may not work with certain data.

1. Select the print command in your application.
2. Select **Dell Printer E310dw**, and then click the printing properties or preferences button.  
The printer driver window appears.
3. Click the **Advanced** tab.
4. Click the **Other Print Options** button.
5. Select the **Print Text in Black** option from the **Printer Function** list.
6. Select the **Print Text in Black** check box.
7. Click **OK** to return to the printer driver window.
8. Click **OK**.
9. Complete your print operation.

### **Save an Archive File of the Print Data (Windows®)**

Print data can be saved as a PDF file to your computer.

1. Select the print command in your application.
2. Select **Dell Printer E310dw**, and then click the printing properties or preferences button.  
The printer driver window appears.
3. Click the **Advanced** tab.
4. Click the **Other Print Options** button.
5. Select the **Print Archive** option from the **Printer Function** list.
6. Select the **Print Archive** check box.
7. Change the file size by moving the **File Size** slider to the right or left.  
The resolution is set according to the file size.
8. Click **OK** to return to the printer driver window.
9. Click **OK**.
10. Complete your print operation.  
The machine prints the data and saves the archive file to your computer.

## Select a Print Profile (Windows®)

**Print Profiles** are presets designed to give you quick access to frequently-used printing configurations.

1. Select the print command in your application.
2. Select **Dell Printer E310dw**, and then click the printing properties or preferences button.  
The printer driver window appears.
3. Click the **Print Profiles** tab.
4. Select your profile from the print profile list.  
The profile settings are shown on the left side of the printer driver window.
5. Do one of the following:
  - If the settings are correct for your print job, click **OK**.
  - To change the settings, go back to the **Basic** or **Advanced** tab, change settings, and then click **OK**.

**NOTE:** To display the **Print Profiles** tab at the front of the window the next time you print, select the **Always show Print Profiles tab first.** check box.

## Add a Print Profile

Add up to 20 new print profiles with customized settings.

1. Select the print command in your application.
2. Select **Dell Printer E310dw**, and then click the printing properties or preferences button.  
The printer driver window appears.
3. Click the **Basic** tab and the **Advanced** tab, and configure the print settings you want for the new Print Profile.
4. Click the **Print Profiles** tab.
5. Click **Add Profile**.  
The **Add Profile** dialog box appears.
6. Type the new print profile name in the **Name** field.
7. Click the icon you want to use to represent this profile from the icon list.
8. Click **OK**.

The new Print Profile name is added to the list in the **Print Profiles** tab.



## Delete a Print Profile

1. Select the print command in your application.
2. Select **Dell Printer E310dw**, and then click the printing properties or preferences button.  
The printer driver window appears.
3. Click the **Print Profiles** tab.
4. Click **Delete Profile**.  
The **Delete Profile** dialog box appears.
5. Select the profile you want to delete.
6. Click **Delete**.

7. Click **Yes**.
8. Click **Close**.

## Change the Default Print Settings (Windows®)

When you change print settings from within a program, the changes apply only to the items you are printing in that program, at that time. To select print settings to use for all of your Windows® programs, all the time, use these steps to change the default print settings.

1. Do one of the following:
  - (For Windows Server®2003)  
Click **Start > Printers and Faxes**.
  - (For Windows Vista® and Windows Server®2008)
    - Click  (**Start**) > **Control Panel > Hardware and Sound > Printers**.
    - (For Windows®7 and Windows Server®2008 R2)
      - Click  (**Start**) > **Devices and Printers**.
      - (For Windows®8)  
Move your mouse to the lower right corner of your desktop. When the menu bar appears, click **Settings** , and then click **Control Panel**. In the **Hardware and Sound** group, click **View devices and printers**.
      - (For Windows Server®2012)  
Move your mouse to the lower right corner of your desktop. When the menu bar appears, click **Settings** , and then click **Control Panel**. In the **Hardware** group, click **View devices and printers**.
      - (For Windows Server®2012 R2)  
Click **Control Panel** on the **Start** screen. In the **Hardware** group, click **View devices and printers**.
2. Right-click the **Dell Printer E310dw** icon, and then select **Printer properties**. If printer driver options appear, select your printer driver.
3. Click the **General** tab, and then click the **Printing Preferences...** or **Preferences...** button.  
The printer driver dialog box appears.  
**NOTE:** To configure the tray settings, click the **Device Settings** tab.  
**NOTE:** To change the printer port, click the **Ports** tab.
4. Select the print settings you want to use as defaults for all of your Windows® programs.
5. Click **OK**.
6. Close the printer properties dialog box.

## Print from Your Computer (Macintosh)

- Print a Document (Macintosh)
- Set Print Options (Macintosh)
- Monitor the Status of the Machine from Your Computer (Macintosh)  
The Status Monitor utility is a configurable software tool for monitoring the status of a device, allowing you to

get immediate notification of error messages, such as paper empty or paper jam, at pre-set update intervals. You can also access Web Based Management.

## Print a Document (Macintosh)

1. Make sure you have loaded the correct size paper in the paper tray.
2. From an application, such as Apple TextEdit, click the **File** menu, and then select **Print**.
3. Select **Dell Printer E310dw**.  
**NOTE:** For more page setup options, click the **Show Details** button.
4. Type the number of copies you want in the **Copies** field.
5. Click the **Paper Size** pop-up menu, and then select your paper size.
6. Select the **Orientation** option that matches the way you want the document to print.
7. Click the application pop-up menu, and then select **Print Settings**.  
The **Print Settings** options appear.
8. Click the **Media Type** pop-up menu, and then select the type of paper you are using.
9. Change other printer settings, if needed.
10. Click **Print**.

## Set Print Options (Macintosh)

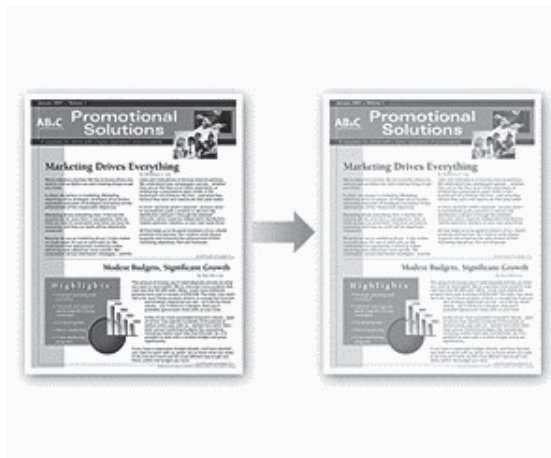
- Print in Toner Save Mode (Macintosh)  
This feature conserves your toner by using less toner to print documents; print appears lighter, but is still readable.
- Print Multiple Copies of the Same Document (Macintosh)
- Print on Both Sides of the Paper (Macintosh)
- Change the Paper Size (Macintosh)  
Paper Size choices include a large selection of standard paper sizes.
- Change the Orientation of Your Print (Portrait or Landscape) (Macintosh)
- Print More Than One Page on a Single Sheet of Paper (N in 1) (Macintosh)
- Reverse Print (Macintosh)  
This setting rotates the printed image 180 degrees.
- Flip Horizontally (Macintosh)  
The **Flip horizontally** option reverses the printout horizontally from left to right.
- Scaled Print (Macintosh)  
This option lets you enlarge or reduce the pages in your document to fit your printed paper size.
- Change the Media Type (Macintosh)  
To achieve the best print results, the media being printed on should be selected in the driver. The machine changes the way it prints depending on the selected media type.
- Change the Resolution (Macintosh)  
You can choose the print resolution. As print resolution and speed are related, the higher the resolution, the longer it will take to print the document.



- Reduce or Enlarge Document Layout (Macintosh)  
You can reduce or enlarge the layout of a document by scaling it to a percentage of the document's original size.
- Change the Paper Source (Macintosh)  
Select a paper source setting that matches your print conditions or purpose.
- Change the Graphic Quality (Macintosh)  
You can change the print quality.
- Reduce Paper Curl (Macintosh)
- Improve Toner Fixing (Macintosh)
- Adjust the Print Density (Macintosh)  
You can increase or decrease the print density.
- Skip Blank Page (Macintosh)  
Use this option to allow the printer driver to automatically detect blank pages and exclude them from printing.

### Print in Toner Save Mode (Macintosh)

This feature conserves your toner by using less toner to print documents; print appears lighter, but is still readable.



**NOTE:** We do not recommend using this mode for printing photo or grayscale images.

1. From an application, such as Apple TextEdit, click the **File** menu, and then select **Print**.
2. Select **Dell Printer E310dw**.

**NOTE:** For more page setup options, click the **Show Details** button.

3. Click the application pop-up menu, and then select **Print Settings**.  
The **Print Settings** options appear.
4. Click the **Advanced** print settings list.
5. Click **Toner Save Mode**.
6. Check the **Toner Save Mode** check box.
7. Change other printer settings if needed.
8. Click **Print**.

## Print Multiple Copies of the Same Document (Macintosh)

1. From an application, such as Apple TextEdit, click the **File** menu, and then select **Print**.
2. Select **Dell Printer E310dw**.

**NOTE:** For more page setup options, click the **Show Details** button.

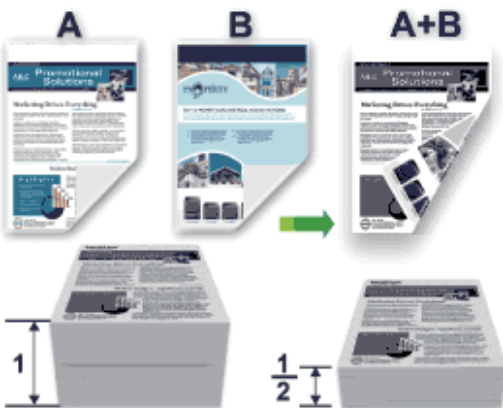
3. Type the number of copies you want in the **Copies** field.
4. Click the application pop-up menu, and then select **Paper Handling**.  
The **Paper Handling** options appear.
5. Select the **Collate pages** check box, if needed.

### Collate pages

When the **Collate pages** check box is selected, one complete copy of your document will be printed, and then reprinted according to the number of copies you select. If the **Collate pages** check box is not selected, then each page will be printed according to the number of copies selected before the next page of the document is printed.

6. Change other printer settings, if needed.
7. Click **Print**.

## Print on Both Sides of the Paper (Macintosh)



- 
- Select Letter, Legal, or Folio sized paper when using the automatic 2-sided printing function.
  - Make sure the back cover is closed.
  - If paper is curled, straighten it and put it back in the paper tray.
  - Use regular paper or thin paper. DO NOT use bond paper.
  - If the paper is too thin, it may wrinkle.
  - When you use the manual 2-sided printing function, it is possible there may be paper jams or poor print quality.
- 

1. From an application, such as Apple TextEdit, click the **File** menu, and then select **Print**.
2. Select **Dell Printer E310dw**.

**NOTE:** For more page setup options, click the **Show Details** button.


3. Select the **Orientation** option that matches the way you want the document to print.
4. For automatic 2-sided printing, do the following:
  - a. Click the application pop-up menu, and then select **Layout**.  
The **Layout** setting options appear.
  - b. In the **Two-Sided** section, select the **Short-Edge binding** or **Long-Edge binding** option.
  - c. Change other printer settings, if needed.
  - d. Click **Print**.
5. For manual 2-sided printing, do the following:
  - a. Click the application pop-up menu, and then select **Paper Handling**.  
The **Paper Handling** options appear.
  - b. In the **Pages to Print** pop-up menu, select **Even Only**.
  - c. Change other print settings, if needed.
  - d. Click the **Print** button.
  - e. After the machine prints the even-numbered pages, remove the printed pages from the output paper tray.
  - f. Make sure the pages are completely flat, and put the paper back in the tray, blank side facing down.
  - g. Repeat steps 1-3, selecting the same printer and settings you used to print the even-numbered pages.
  - h. Click the application pop-up menu, and then select **Paper Handling**. The **Paper Handling** options appear.
  - i. In the **Pages to Print** pop-up menu, select **Odd Only**.
  - j. Click **Print**.

### Change the Paper Size (Macintosh)

Paper Size choices include a large selection of standard paper sizes.

1. From an application, such as Apple TextEdit, click the **File** menu, and then select **Print**.
2. Select **Dell Printer E310dw**.  
**NOTE:** For more paper setup options, click the **Show Details** button.
3. Click the **Paper Size** pop-up menu, and then select your paper size.
4. Change other printer settings, if needed.
5. Click **Print**.

### Create Custom Size (Macintosh)

1. Click the **Paper Size** pop-up menu, and then select **Manage Custom Sizes....**
2. Click .
3. Type the name for this custom size.
4. Type size and margin values in the **Paper Size** and **Non-Printable Area** fields.
5. Click **OK**.

## Change the Orientation of Your Print (Portrait or Landscape) (Macintosh)



1. From an application, such as Apple TextEdit, click the **File** menu, and then select **Print**.
2. Select **Dell Printer E310dw**.  
**NOTE:** For more page setup options, click the **Show Details** button.
3. Select the **Orientation** option that matches the way you want the document to print.
4. Change other printer settings, if needed.
5. Click **Print**.

## Print More Than One Page on a Single Sheet of Paper (N in 1) (Macintosh)



1. From an application, such as Apple TextEdit, click the **File** menu, and then select **Print**.
2. Select **Dell Printer E310dw**.  
**NOTE:** For more page setup options, click the **Show Details** button.
3. Click the application pop-up menu, and then select **Layout**.  
The **Layout** setting options appear.
4. Click the **Pages per Sheet** pop-up menu, and then select the number of pages to print on each sheet.
5. Click the **Layout Direction** menu, and then select how you want the pages ordered.
6. Click the **Border** pop-up menu, and then select your border line type.

7. Change other printer settings if needed.
8. Click **Print**.

### Reverse Print (Macintosh)

This setting rotates the printed image 180 degrees.



1. From an application, such as Apple TextEdit, click the **File** menu, and then select **Print**.
2. Select **Dell Printer E310dw**.  
**NOTE:** For more page setup options, click the **Show Details** button.
3. Click the application pop-up menu, and then select **Layout**.  
The **Layout** setting options appear.
4. Select the **Reverse page orientation** check box.
5. Change other printer settings, if needed.
6. Click **Print**.

### Flip Horizontally (Macintosh)

The **Flip horizontally** option reverses the printout horizontally from left to right.



1. From an application, such as Apple TextEdit, click the **File** menu, and then select **Print**.
2. Select **Dell Printer E310dw**.  
**NOTE:** For more page setup options, click the **Show Details** button.

3. Click the application pop-up menu, and then select **Layout**.  
The **Layout** setting options appear.
4. Select the **Flip horizontally** check box.
5. Change other printer settings, if needed.
6. Click **Print**.

### Scaled Print (Macintosh)

This option lets you enlarge or reduce the pages in your document to fit your printed paper size.

1. From an application, such as Apple TextEdit, click the **File** menu, and then select **Print**.
2. Select **Dell Printer E310dw**.

**NOTE:** For more page setup options, click the **Show Details** button.

3. Click the application pop-up menu, and then select **Paper Handling**.  
The **Paper Handling** options appear.
4. Select the **Scale to fit paper size** check box, and then choose your paper size from the **Destination Paper Size** pop-up menu.

**NOTE:** If you want to scale the document because it is too big for your paper, select **Scale down only**. If this option is selected and the document is formatted for paper that is smaller than the paper you have, the document prints at its original size.

5. Change other printer settings if needed.
6. Click **Print**.

### Change the Media Type (Macintosh)

To achieve the best print results, the media being printed on should be selected in the driver. The machine changes the way it prints depending on the selected media type.

1. From an application, such as Apple TextEdit, click the **File** menu, and then select **Print**.
2. Select **Dell Printer E310dw**.

**NOTE:** For more page setup options, click the **Show Details** button.

3. Click the application pop-up menu, and then select **Print Settings**.  
The **Print Settings** options appear.
4. Click the **Media Type** pop-up menu, and then select the media type you want to use.

Select this Media Type	For this paper
Plain Paper	Ordinary plain paper
Thin Paper	Ordinary thin paper
Thick Paper	Rough paper or thicker paper
Thicker Paper	Select this option if you have selected <b>Thick Paper</b> , and toner smudges while printing.
Bond Paper	Bond paper
Envelopes	Envelopes

Env. Thick	Select this option if the toner does not correctly stick to the envelope when the <b>Envelopes</b> option is selected.
Env. Thin	Select this option if the envelope is crumpled when the <b>Envelopes</b> option is selected.
Recycled Paper	Recycled paper
Label	Label

5. Change other printer settings, if needed.
6. Click **Print**.

### Change the Resolution (Macintosh)

You can choose the print resolution. As print resolution and speed are related, the higher the resolution, the longer it will take to print the document.

1. From an application, such as Apple TextEdit, click the **File** menu, and then select **Print**.
2. Select **Dell Printer E310dw**.
 

**NOTE:** For more page setup options, click the **Show Details** button.
3. Click the application pop-up menu, and then select **Print Settings**.  
The **Print Settings** options appear.
4. Click the **Resolution** pop-up menu, and then select the print resolution you want to use.
  - **300 dpi**
  - **600 dpi**
  - **HQ 1200**
5. Change other printer settings, if needed.
6. Click **Print**.

### Reduce or Enlarge Document Layout (Macintosh)

You can reduce or enlarge the layout of a document by scaling it to a percentage of the document's original size.

1. From an application, such as Apple TextEdit, click the **File** menu, and then select **Page Setup**.
2. Select **Dell Printer E310dw**.
3. Type the percentage by which you want to reduce or enlarge the printout in the **Scale** field.
4. Change other printer settings, if needed.
5. Click **OK**.
6. From an application, such as Apple TextEdit, click the **File** menu, and then select **Print**.
7. Click **Print**.

## Change the Paper Source (Macintosh)

Select a paper source setting that matches your print conditions or purpose.

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If you load one sheet of paper in the manual feed slot, the paper is automatically pulled from this slot. Do not load any paper in the manual feed slot when printing from paper tray.

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1. From an application, such as Apple TextEdit, click the **File** menu, and then select **Print**.

2. Select **Dell Printer E310dw**.

**NOTE:** For more page setup options, click the **Show Details** button.

3. Click the application pop-up menu, and then select **Print Settings**.

The **Print Settings** options appear.

4. Click the **Paper Source** pop-up menu, and then select your paper tray.

Option	Description
Auto Select	The machine will automatically select the tray to use if the paper type and paper size configured on the machine match the printer driver settings. The paper size and paper type for each tray must be configured correctly on the machine.
Tray1	The machine will exclusively use tray #1 when printing.
Manual	The machine will exclusively use the Manual Feed Slot when printing.

5. Change other printer settings, if needed.

6. Click **Print**.

## Change the Graphic Quality (Macintosh)

You can change the print quality.

1. From an application, such as Apple TextEdit, click the **File** menu, and then select **Print**.

2. Select **Dell Printer E310dw**.

**NOTE:** For more page setup options, click the **Show Details** button.

3. Click the application pop-up menu, and then select **Print Settings**.

The **Print Settings** options appear.

4. Click the **Advanced** print settings list.

5. Click **Graphics Quality**, and then select the print quality you want to use.

Option	Description
<b>Graphics</b>	The Graphics mode prioritizes contrast. Choose this setting for printing text and figures, such as business and presentation documents. You can represent sharp contrasts in shaded areas.
<b>Text</b>	This is the best mode for printing text documents.

6. Click **Print**.



## Reduce Paper Curl (Macintosh)



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If you are printing only a few pages, you do not need to select this setting. If paper curls excessively, we recommend changing the **Media Type** setting in the printer driver to the **Thin Paper** or **Env. Thin** setting.

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**NOTE:** This setting decreases the temperature of the machine's fusing process, which reduces paper curl.

1. From an application, such as Apple TextEdit, click the **File** menu, and then select **Print**.
2. Select **Dell Printer E310dw**.  
**NOTE:** For more page setup options, click the **Show Details** button.
3. Click the application pop-up menu, and then select **Print Settings**.  
The **Print Settings** options appear.
4. Click the **Advanced** print settings list.
5. Select the **Improve Print Output** option.
6. Select the **Reduce Paper Curl** option.
7. Click **Print**.

## Improve Toner Fixing (Macintosh)



**NOTE:** This setting increases the temperature of the machine's fusing process, which improves toner's ability to stick to paper.

1. From an application, such as Apple TextEdit, click the **File** menu, and then select **Print**.
2. Select **Dell Printer E310dw**.  
**NOTE:** For more page setup options, click the **Show Details** button.

3. Click the application pop-up menu, and then select **Print Settings**.  
The **Print Settings** options appear.
4. Click the **Advanced** print settings list.
5. Select the **Improve Print Output** option.
6. Select **Improve Toner Fixing**.
7. Click **Print**.

### **Adjust the Print Density (Macintosh)**

You can increase or decrease the print density.

1. From an application, such as Apple TextEdit, click the **File** menu, and then select **Print**.
2. Select **Dell Printer E310dw**.  
**NOTE:** For more page setup options, click the **Show Details** button.
3. Click the application pop-up menu, and then select **Print Settings**.  
The **Print Settings** options appear.
4. Click the **Advanced** print settings list.
5. Click **Density Adjustment**.
6. Clear the **Printer Default** check box.
7. To increase or decrease the print density, move the slide bar to the right or left.
8. Click **Print**.

### **Skip Blank Page (Macintosh)**

Use this option to allow the printer driver to automatically detect blank pages and exclude them from printing.

1. From an application, such as Apple TextEdit, click the **File** menu, and then select **Print**.
2. Select **Dell Printer E310dw**.  
**NOTE:** For more page setup options, click the **Show Details** button.
3. Click the application pop-up menu, and then select **Print Settings**.  
The **Print Settings** options appear.
4. Click the **Advanced** print settings list.
5. Click the **Other Print Options** menu.
6. Select the **Skip Blank Page** check box.
7. Click **Print**.


### **Monitor the Status of the Machine from Your Computer (Macintosh)**

The Status Monitor utility is a configurable software tool for monitoring the status of a device, allowing you to get immediate notification of error messages, such as paper empty or paper jam, at pre-set update intervals. You can also access Web Based Management.

1. Click the **System Preferences** menu, select **Print & Scan** or **Printers & Scanners**, and then select your machine.
2. Click the **Options & Supplies** button.
3. Click the **Utility** tab, and then click the **Open Printer Utility** button.

Status Monitor starts.

#### Updating the machine's status

To view the latest machine status while the **Status Monitor** window is open, click the  icon. You can set the interval at which the software updates machine status information. Click **Dell Status Monitor** in the menu bar, and then select **Preferences**.

#### Web Based Management (Network Connection Only)

Access the Web Based Management System by clicking the machine icon on the **Status Monitor** screen. You can use a standard Web Browser to manage your machine using HTTP (Hyper Text Transfer Protocol).

## Adjust Print Settings from the Machine's Control Panel

- Cancel a Print Job
- Change 2-Sided Print Settings  
Change the settings for printing on both sides of the paper from your machine's control panel.
- Auto Continue  
This setting enables the machine to automatically clear a paper size error and use any compatible paper from other paper trays to complete the print job.
- Restore Printer Factory Settings  
Use this function to return the machine's printer settings to the factory settings.
- Print the Internal Font List  
Print a list of the machine's internal (also called resident) fonts to see how each font looks before you select it.
- Print a List of Printer Settings
- Test Print  
If there are problems with print quality, follow these instructions to do a test print.

### Cancel a Print Job

1. On the machine's control panel, press and hold **X (Cancel)** for about two seconds to cancel the current print job.

### Change 2-Sided Print Settings

Change the settings for printing on both sides of the paper from your machine's control panel.

---

Settings in the printer driver always take priority over settings you change manually on the control panel. If you do not print 2-sided frequently, select **None** for the **2-sided / Booklet** pull down list in the printer driver, and use the control panel to turn it on manually only when you want to print on both sides of the paper.

---

1. Press **▲** or **▼** to display the **Paper Tray** option, and then press **OK**.
2. Press **▲** or **▼** to display the **2-sided** option, and then press **OK**.

3. Press ▲ or ▼ to display the Off , On(Long Bind) , or On(Short Bind) option, and then press **OK**.

## Auto Continue

This setting enables the machine to automatically clear a paper size error and use any compatible paper from other paper trays to complete the print job.

1. Press ▲ or ▼ to display the Print Menu option, and then press **OK**.
2. Press ▲ or ▼ to display the Auto Continue option, and then press **OK**.
3. Press ▲ or ▼ to display the On or Off option, and then press **OK**.

## Restore Printer Factory Settings

Use this function to return the machine's printer settings to the factory settings.

---

This will not reset the network settings.

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1. Press ▲ or ▼ to display the Reset Menu option, and then press **OK**.
2. Press ▲ or ▼ to display the Factory Reset option, and then press **OK**.
3. Press ▲ to select Reset.

## Print the Internal Font List

Print a list of the machine's internal (also called resident) fonts to see how each font looks before you select it.

1. Press ▲ or ▼ to display the Machine Info. option, and then press **OK**.
2. Press ▲ or ▼ to display the Print Font option, and then press **OK**.
3. Press **OK**.

The machine prints the Internal Font List.

## Print a List of Printer Settings

1. Press ▲ or ▼ to display the Machine Info. option, and then press **OK**.
2. Press ▲ or ▼ to display the Print Settings option, and then press **OK**.

The machine prints the Printer Settings.

## Test Print

If there are problems with print quality, follow these instructions to do a test print.

1. Press ▲ or ▼ to display the Machine Info. option, and then press **OK**.
2. Press ▲ or ▼ to display the Test Print option, and then press **OK**.

The machine prints out the test page.

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# Network

- Get Started

We recommend setting up and connecting to your network using the Dell installation CD-ROM. This guide provides more information on network connection types, introduces various methods to manage your network and explains some useful network features of your Dell machine.

- Select Your Network Connection Type

You must identify your network connection type: wired network connection or wireless network connection.

- Learn to Use Network Management Utilities

Configure and change your Dell machine's network settings using a management utility.

- Locate the Machine's Network Settings

You can change your machine's network settings (IP address, subnet mask, gateway and others) using the control panel, or Web Based Management.

- Additional Methods of Configuring Your Dell Machine for a Wireless Network

To connect your machine to your wireless network, we recommend using the Installer CD-ROM.

- Advanced Network Features

- Technical Information for Advanced Users

- Network Menu on the Dell Control Panel

The control panel's *Network* menu selections allow you to configure the Dell machine for your network.

## Get Started

We recommend setting up and connecting to your network using the Dell installation CD-ROM. This guide provides more information on network connection types, introduces various methods to manage your network and explains some useful network features of your Dell machine.

- Supported Basic Network Features

The print server supports various features depending on the operating system. Use this chart to see what network features and connections are supported by each operating system.

## Supported Basic Network Features

The print server supports various features depending on the operating system. Use this chart to see what network features and connections are supported by each operating system.

<b>Operating Systems</b>	<b>Windows Vista® Windows®7 Windows®8</b>	<b>Windows Server® 2003/2008/2012/2012 R2</b>	<b>OS X v10.8.x OS X v10.9.x OS X v10.10.x</b>
Printing	Yes	Yes	Yes
Web Based Management	Yes	Yes	Yes
Status Monitor			Yes
Vertical Pairing (Windows®7 and Windows®8 only)	Yes		

## Select Your Network Connection Type

You must identify your network connection type: wired network connection or wireless network connection.

- **Wired Network Connection Examples**  
Identify your wired network connection type: Peer-to-Peer or Network Shared environment.
- **Wireless Network Connection Examples**  
Identify your wireless network connection type: Infrastructure mode, Ad-Hoc mode, or Wi-Fi Direct™ mode.

### Wired Network Connection Examples

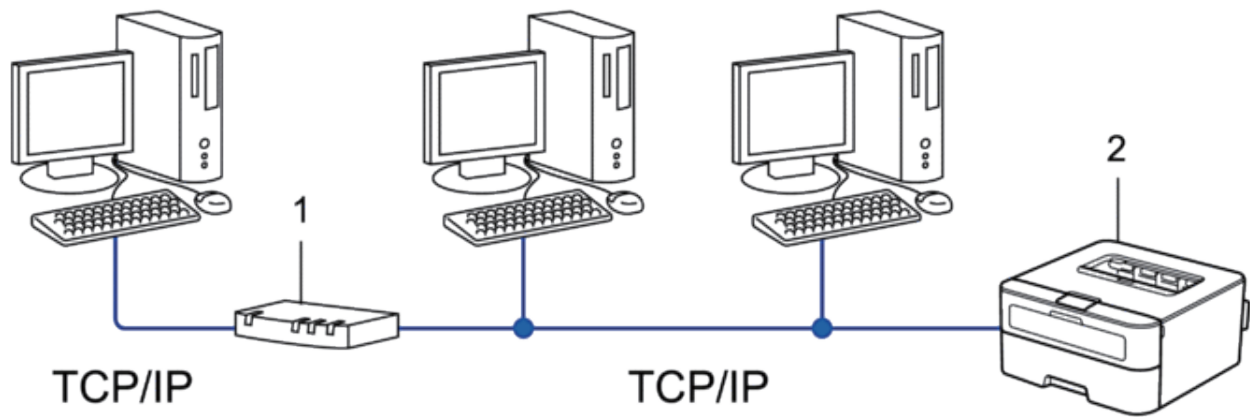
Identify your wired network connection type: Peer-to-Peer or Network Shared environment.

- **Peer-to-Peer Printing Using TCP/IP**  
In a Peer-to-Peer environment, each computer sends and receives data directly to and from each device. There is no central server controlling file access or printer sharing.
- **Network Shared Printing**  
In a Network Shared environment, each computer sends data via a centrally controlled computer. This type of computer is often called a "Server" or a "Print Server". Its job is to control all print jobs.

### Peer-to-Peer Printing Using TCP/IP

In a Peer-to-Peer environment, each computer sends and receives data directly to and from each device. There is no central server controlling file access or printer sharing.





1. Router

2. Network Machine (your machine)

**NOTE:** In a smaller network of two or three computers, we recommend the Peer-to-Peer printing method, as it is easier to configure than the Network Shared printing method.

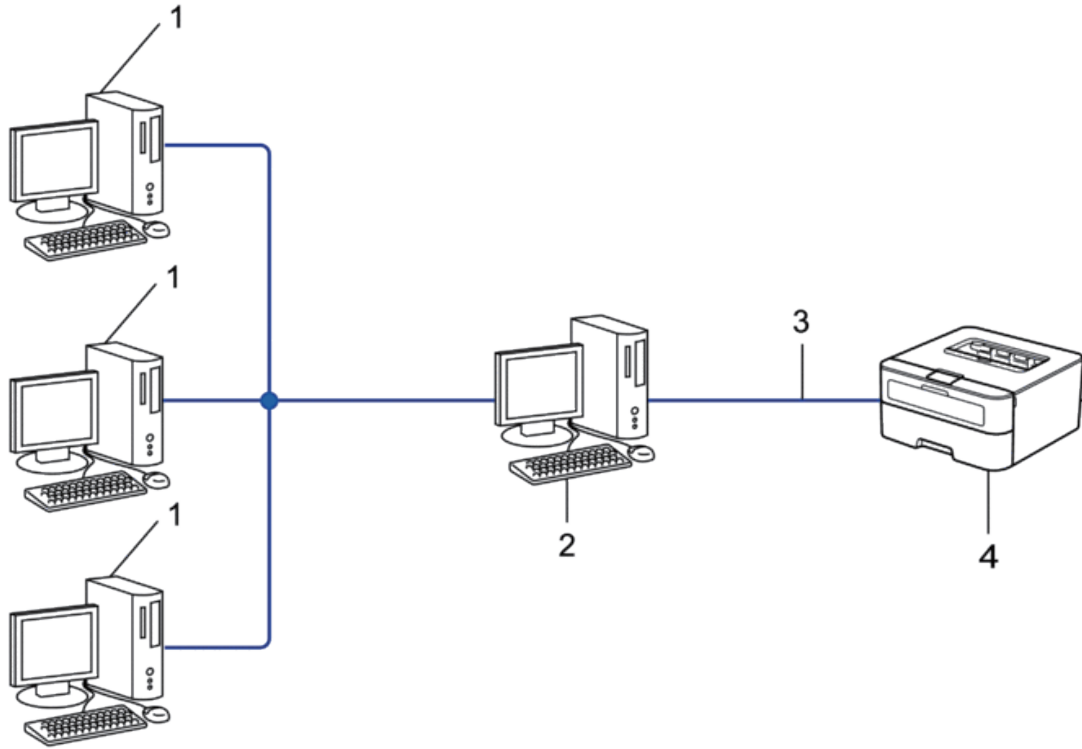
**NOTE:** Each computer must use the TCP/IP protocol.

**NOTE:** The Dell machine needs an appropriate IP address configuration.

**NOTE:** If you are using a router, the Gateway address must be configured on the computers and the Dell machine.

### Network Shared Printing

In a Network Shared environment, each computer sends data via a centrally controlled computer. This type of computer is often called a "Server" or a "Print Server". Its job is to control all print jobs.



1. Client Computer
2. Centrally controlled computer, also known as the "Server" or "Print Server"
3. Ethernet Cable or USB
4. Network Machine (your machine)

**NOTE:** In a larger network, we recommend a Network Shared Printing environment.

**NOTE:** The "Server" or the "Print Server" must use the TCP/IP protocol.

**NOTE:** The Dell machine needs to have an appropriate IP address configuration, unless it is connected via the USB interface at the server.

## Wireless Network Connection Examples

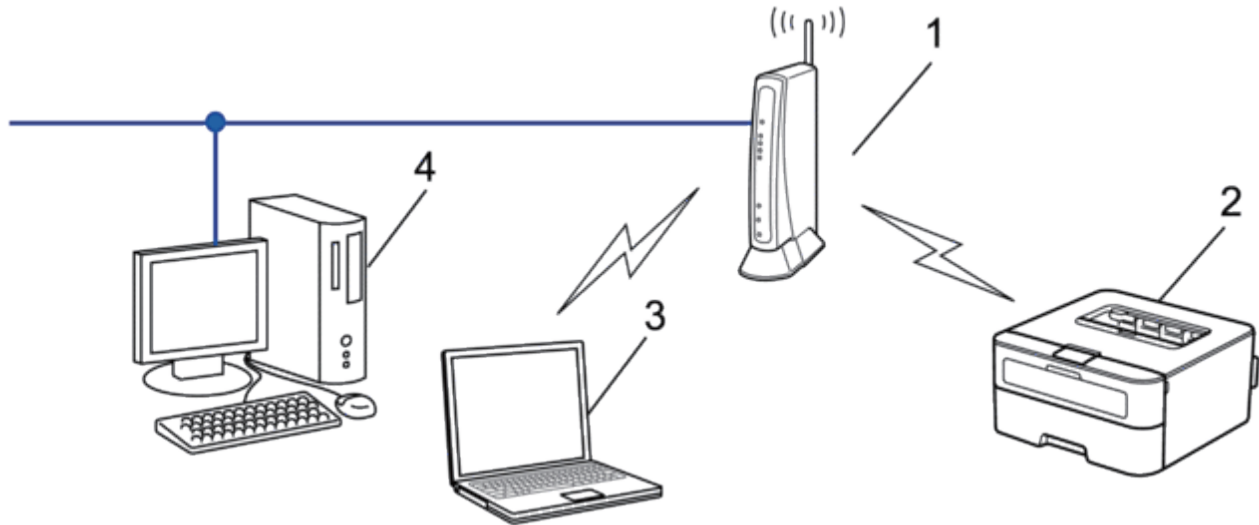
Identify your wireless network connection type: Infrastructure mode, Ad-Hoc mode, or Wi-Fi Direct™ mode.

- Connected to a Computer with a Wireless LAN Access Point Router in the Network (Infrastructure Mode)  
This type of network has a wireless LAN central access point/router at the heart of the network. The access point can also act as a bridge or a gateway to a wired network. When the Dell wireless machine (your machine) is part of this network, it receives all print jobs via an access point.
- Connected to a Wireless Computer without a Wireless LAN Access Point Router in the Network (Ad-Hoc Mode)  
This type of network does not have a central wireless LAN access point/router. Each wireless client communicates directly with each other. When the Dell wireless machine (your machine) is part of this network, it receives all print jobs directly from the computer sending print data.

- Wi-Fi Direct

### Connected to a Computer with a Wireless LAN Access Point Router in the Network (Infrastructure Mode)

This type of network has a wireless LAN central access point/router at the heart of the network. The access point can also act as a bridge or a gateway to a wired network. When the Dell wireless machine (your machine) is part of this network, it receives all print jobs via an access point.



1. Wireless LAN Access Point/Router
2. Wireless Network Machine (your machine)
3. Wireless Computer Connected to the Wireless LAN Access Point/Router
4. Wired Computer Connected to the Wireless LAN Access Point/Router with a Network Cable

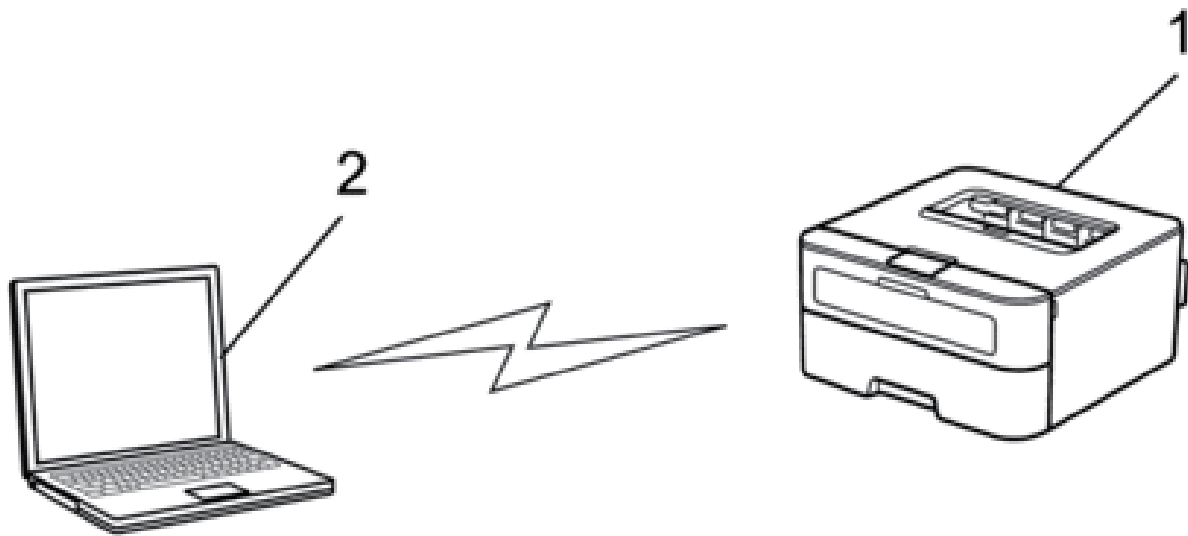
#### Configuration Method

Select one of these methods for configuring your Dell machine in a wireless network environment.

- Wireless Configuration Using the Setup Wizard from the Computer (Recommended)
- Wireless Configuration Using the Setup Wizard from the Control Panel
- One-Push Wireless Configuration Using WPS or AOSS™
- PIN Method Wireless Configuration Using WPS

### Connected to a Wireless Computer without a Wireless LAN Access Point Router in the Network (Ad-Hoc Mode)

This type of network does not have a central wireless LAN access point/router. Each wireless client communicates directly with each other. When the Dell wireless machine (your machine) is part of this network, it receives all print jobs directly from the computer sending print data.



1. Wireless Network Machine (your machine)

2. Wireless Computer

We cannot guarantee secure wireless network connections with Windows Server® products in Ad-Hoc mode.

## Learn to Use Network Management Utilities

Configure and change your Dell machine's network settings using a management utility.

- Web Based Management

## Learn about Network Management Utilities

- What is Web Based Management?

### What is Web Based Management?

Web Based Management is a utility that uses a standard web browser to manage your machine using the Hyper Text Transfer Protocol (HTTP). Type your machine's IP address into your web browser to access and change your print server settings.

**NOTE:** We recommend Microsoft® Internet Explorer® 8.0/9.0/10.0 for Windows® and Safari 5.0/6.0 for Macintosh. Make sure that JavaScript and Cookies are always enabled in whichever browser you use. If a different web browser is used, make sure it is compatible with HTTP 1.0 and HTTP 1.1.

**NOTE:** You must use the TCP/IP protocol on your network and have a valid IP address programmed into the print server and your computer.

## Access Network Management Software and Utilities

Before using your Dell machine in a network environment, you must install the Dell software and configure the appropriate TCP/IP network settings on the machine itself.

If you do not want to or are unable to use the Dell installer, see *Related Information*.

### Access Web Based Management

1. Start your web browser.
2. Type "http://machine's IP address" in your browser's address bar (where "machine's IP address" is the machine's IP address).

For example: http://192.168.1.2

**NOTE:** If you are using a Domain Name System or enable a NetBIOS name, you can type another name, such as "SharedPrinter" instead of the IP address.

- For example:

http://SharedPrinter

If you enable a NetBIOS name, you can also use the node name.

- For example:

http://DELL000499

The NetBIOS name can be found in the Network Configuration Report.

**NOTE:** For Macintosh, access Web Based Management by clicking the machine's icon on the **Status Monitor** screen.

3. No password is required by default. Type a password if you have set one, and then click .

You can now change the print server settings.

If you have changed the protocol settings, you must restart the machine after clicking **Submit** to activate the configuration.

### Set a Logon Password for Web Based Management

We recommend setting a logon password to prevent unauthorized access to Web Based Management.

1. Start your web browser.
2. Type "http://machine's IP address" in your browser's address bar (where "machine's IP address" is the machine's IP address).

For example: http://192.168.1.2

**NOTE:** If you are using a Domain Name System or enable a NetBIOS name, you can type another name, such as "SharedPrinter" instead of the IP address.

- For example:

http://SharedPrinter


If you enable a NetBIOS name, you can also use the node name.

- For example:

http://DELL000499

The NetBIOS name can be found in the Network Configuration Report.

**NOTE:** For Macintosh, access Web Based Management by clicking the machine's icon on the **Status Monitor** screen.

3. No password is required by default. Type a password if you have set one, and then click .
4. Click **Administrator**.
5. Type the password you want to use (up to 32 characters).
6. Retype the password in the **Confirm New Password** box.
7. Click **Submit**.

In the future, every time you access Web Based Management, type the password in the **Login** box, and then click



After configuring the settings, log off by clicking .

**NOTE:** If you are not setting a logon password, you can also set a password by clicking the **Please configure the password** button on the machine's web page.

## Locate the Machine's Network Settings

You can change your machine's network settings (IP address, subnet mask, gateway and others) using the control panel, or Web Based Management.

- Locate Network Settings When Using the Dell Control Panel
- Locate Network Settings When Using Web Based Management

### Locate Network Settings When Using the Dell Control Panel

1. Press **▲** or **▼** to select the **Network** option, and then press **OK**.
2. Proceed to the menu selections you want to configure.

### Locate Network Settings When Using Web Based Management

1. Start your web browser.
2. Type "http://machine's IP address" in your browser's address bar (where "machine's IP address" is the machine's IP address).

For example: http://192.168.1.2

**NOTE:** If you are using a Domain Name System or enable a NetBIOS name, you can type another name, such as "SharedPrinter" instead of the IP address.

- For example:  
http://SharedPrinter

If you enable a NetBIOS name, you can also use the node name.

- For example:  
http://DELL000499

The NetBIOS name can be found in the Network Configuration Report.

**NOTE:** For Macintosh, access Web Based Management by clicking the machine's icon on the **Status Monitor** screen.

**3.** No password is required by default. Type a password if you have set one, and then click .

You can change the network settings.

If you change the protocol settings, restart the machine after clicking **Submit** to activate the configuration.

## Additional Methods of Configuring Your Dell Machine for a Wireless

### Network

To connect your machine to your wireless network, we recommend using the Installer CD-ROM.

- Before Configuring Your Dell Machine for a Wireless Network
- Configure Your Machine for a Wireless Network Using the One Push Method of Wi-Fi Protected Setup™ (WPS) or AOSS™
- Configure Your Machine for a Wireless Network Using the PIN Method of Wi-Fi Protected Setup™ (WPS)  
If your wireless LAN access point/router supports WPS, you can use the Personal Identification Number (PIN) Method to configure your wireless network settings.
- Configure Your Machine for a Wireless Network in Ad-Hoc Mode (For IEEE 802.11b/g/n)
- Configure Your Machine for a Wireless Network Using the Machine's Control Panel Setup Wizard
- Configure Your Machine for a Wireless Network When the SSID Is Not Broadcast
- Use Wi-Fi Direct™

### Before Configuring Your Dell Machine for a Wireless Network

Before attempting to configure a wireless network, confirm the following:

- To achieve optimum results with normal everyday document printing, place the Dell machine as close to the wireless LAN access point/router as possible with minimal obstructions. Large objects and walls between the two devices and interference from other electronic devices can affect the data transfer speed of your documents. Due to these factors, wireless may not be the best method of connection for all types of documents and applications. If you are printing large files, such as multi-page documents with mixed text and large graphics, you may want to consider selecting wired Ethernet for faster data transfer, or USB for the fastest throughput speed.
- Although the Dell machine can be used in both a wired and wireless network, only one connection method can be used at a time. However, a wireless network connection and Wi-Fi Direct connection, or a wired network connection (supported models only) and Wi-Fi Direct connection can be used at the same time.
- Before configuring wireless settings, you must know your Network name (SSID) and Network Key.

### Configure Your Machine for a Wireless Network Using the One Push Method of Wi-Fi Protected Setup™ (WPS) or AOSS™

If your wireless access point/router supports either WPS (Push Button Configuration) or AOSS™, you can use WPS or AOSS™ from your machine's control panel menu to configure your wireless network settings.

**NOTE:** Routers or access points that support WPS are marked with this symbol:



**NOTE:** Routers or access points that support AOSS™ are marked with this symbol:



### How to Configure Your Wireless Network Using the One Push Method of WPS or AOSS™

1. Press ▲ or ▼ to select the `Network` option, and then press **OK**.
2. Press ▲ or ▼ to select the `WLAN` option, and then press **OK**.
3. Press ▲ or ▼ to select the `WPS/AOSS` option, and then press **OK**.
4. When `WLAN Enable?` appears, press ▲ to select `On`.  
This will start the wireless setup wizard. To cancel, press **Back**.
5. When the LCD displays `Press Key on rtr`, press the WPS or AOSS™ button on your wireless access point/router. Press ▲ on the machine's control panel and your machine will automatically detect which mode (WPS or AOSS™) your wireless access point/router uses and try to connect to your wireless network.

If your wireless device is connected successfully, the machine's LCD displays `Connected`. The machine will print your machine's wireless status report. If the connection fails, check the error code on the printed report.

**NOTE:** If the connection fails, your machine reverts to a wired network interface.

For Windows®:

You have completed the wireless network setup. Install drivers and software necessary for operating your device from the Installer CD-ROM.

For Macintosh:

You have completed the wireless network setup. To install drivers and software necessary for operating your device, double-click "StartHereOS X.app" in the installation CD-ROM.

### Configure Your Machine for a Wireless Network Using the PIN Method of Wi-Fi



## Protected Setup™ (WPS)

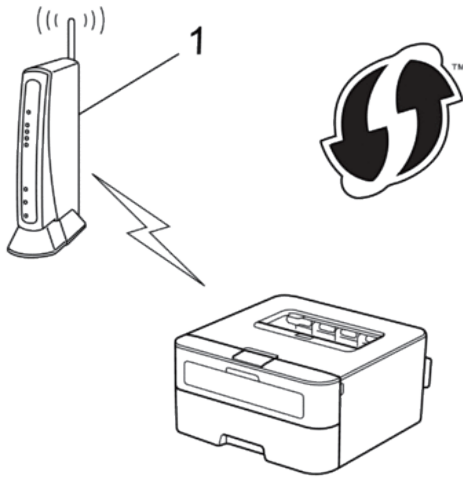
If your wireless LAN access point/router supports WPS, you can use the Personal Identification Number (PIN) Method to configure your wireless network settings.

The PIN Method is one of the connection methods developed by the Wi-Fi Alliance®. By submitting a PIN created by an Enrollee (your machine) to the Registrar (a device that manages the wireless LAN), you can set up the wireless network and security settings. For more information on how to access WPS mode, see the instructions provided with your wireless access point/router.

### Two Wireless Network Connection Types Using the PIN Method of Wi-Fi Protected Setup™ (WPS)

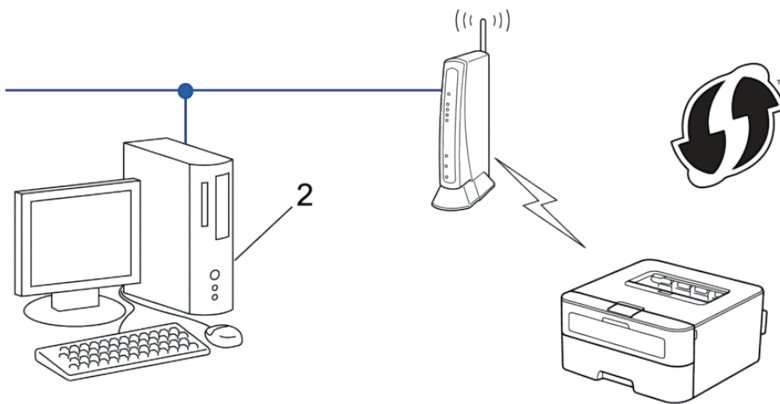
#### Type A

Connection when the wireless LAN access point/router (1) doubles as Registrar.



#### Type B

Connection when another device (2), such as a computer, is used as Registrar.



**NOTE:** Routers or access points that support WPS are marked with this symbol:



## How to Configure Your Wireless Network Using the PIN Method of Wi-Fi Protected Setup™ (WPS)

1. Press ▲ or ▼ to select the **Network** option, and then press **OK**.
2. Press ▲ or ▼ to select the **WLAN** option, and then press **OK**.
3. Press ▲ or ▼ to select the **WPS w/PIN Code** option, and then press **OK**.
4. When **WLAN Enable?** appears, press ▲ to select **On**.  
This will start the wireless setup wizard. To cancel, press **Back**.
5. The LCD displays an eight-digit PIN and the machine starts searching for a wireless LAN access point/router.
6. Using a computer that is on the network, type "http://access point's IP address" in your browser (where "access point's IP address" is the IP address of the device that is used as the Registrar).
7. Go to the WPS setting page and type the PIN, and then follow the on-screen instructions.

**NOTE:** The Registrar is usually the wireless LAN access point/router.

**NOTE:** The setting page will differ depending on the brand of wireless LAN access point/router. For more information, see the instructions supplied with your wireless LAN access point/router.

**If you are using a Windows Vista®, Windows®7, or Windows®8 computer as a Registrar, complete the following steps:**

8. Do one of the following:

- (Windows Vista®)

Click  **(Start) > Network > Add a wireless device.**

- (Windows®7)

Click  **(Start) > Devices and Printers > Add a device.**

- (Windows®8)

Move your mouse to the lower right corner of your desktop. When the menu bar appears, click **Settings > Control Panel > Hardware and Sound > Devices and Printers > Add a device.**

**NOTE:** To use a Windows Vista®, Windows®7, or Windows®8 computer as a Registrar, you must register it to your network in advance. For more information, see the instructions supplied with your wireless LAN access point/router.

**NOTE:** If you use Windows®7 or Windows®8 as a Registrar, you can install the printer driver after the wireless configuration by following the on-screen instructions. To install the full driver and software package, use the Dell

installer on the Installer CD-ROM.

**9.** Select your machine and click **Next**.

**10.** Type the PIN displayed on the machine's LCD, and then click **Next**.

**11.** Select your network, and then click **Next**.

**12.** Click **Close**.

If your wireless device is connected successfully, the machine's LCD displays **Connected**. The machine will print your machine's wireless status report. If the connection fails, check the error code on the printed report.

**NOTE:** If the connection fails, your machine reverts to a wired network interface.

For Windows®:

You have completed the wireless network setup. Install drivers and software necessary for operating your device from the Installer CD-ROM.

For Macintosh:

You have completed the wireless network setup. To install drivers and software necessary for operating your device, double-click "StartHereOS X.app" in the installation CD-ROM.

## Configure Your Machine for a Wireless Network in Ad-Hoc Mode (For IEEE 802.11b/g/n)

- **Configure Your Machine for a Wireless Network in Ad-Hoc Mode Using a New SSID**

If you are using a new SSID, all other devices will connect using the SSID you assign to your Dell machine in the following steps. You must connect to this SSID from your computer when it is configured for Ad-Hoc mode.

- **Configure Your Machine for a Wireless Network in Ad-Hoc Mode Using an Existing SSID**

If you are trying to pair your Dell machine to a computer that is already in Ad-Hoc mode and has a configured SSID, use these instructions.

- **Connected to a Wireless Computer without a Wireless LAN Access Point Router in the Network (Ad-Hoc Mode)**

This type of network does not have a central wireless LAN access point/router. Each wireless client communicates directly with each other. When the Dell wireless machine (your machine) is part of this network, it receives all print jobs directly from the computer sending print data.

### Configure Your Machine for a Wireless Network in Ad-Hoc Mode Using a New SSID

If you are using a new SSID, all other devices will connect using the SSID you assign to your Dell machine in the following steps. You must connect to this SSID from your computer when it is configured for Ad-Hoc mode.

**1.** Press **▲** or **▼** to select the **Network** option, and then press **OK**.

**2.** Press **▲** or **▼** to select the **WLAN** option, and then press **OK**.

**3.** Press **▲** or **▼** to select the **Setup Wizard** option, and then press **OK**.

**4.** When **WLAN Enable?** appears, press **▲** to select **On**.

This will start the wireless setup wizard. To cancel, press **Back**.

**5.** The machine will search for your network and display a list of available SSIDs. Press **▲** or **▼** to select the **<New SSID>** option, and then press **OK**.

6. Enter the SSID name, and then press **OK**.
7. Press **▲** or **▼** to select the Ad-hoc option, and then press **OK**.
8. Press **▲** or **▼** to select the Encryption Type `None` or `WEP` , and then press **OK**.
9. If you selected the `WEP` option for Encryption Type, enter the WEP key, and then press **OK**.

**NOTE:** Your Dell machine supports the use of the first WEP key only.

10. To apply the settings, press **▲**. To cancel, press **▼** .

11. The machine will attempt to connect to the wireless device you have selected.

If your wireless device is connected successfully, the machine's LCD displays `Connected`. The machine will print your machine's wireless status report. If the connection fails, check the error code on the printed report.

**NOTE:** If the connection fails, your machine reverts to a wired network interface.

For Windows®:

You have completed the wireless network setup. Install drivers and software necessary for operating your device from the Installer CD-ROM.

For Macintosh:

You have completed the wireless network setup. To install drivers and software necessary for operating your device, double-click "StartHereOS X.app" in the installation CD-ROM.

## Configure Your Machine for a Wireless Network in Ad-Hoc Mode Using an Existing SSID

If you are trying to pair your Dell machine to a computer that is already in Ad-Hoc mode and has a configured SSID, use these instructions.

---

Before configuring your machine, we recommend writing down your wireless network settings. You will need this information before you continue with the configuration.

---

1. Check and record the current wireless network settings of the computer to which you are connecting.

**NOTE:** The wireless network settings of the computer you are connecting with must be set to Ad-Hoc mode with an SSID already configured. For more information on how to configure your computer in Ad-Hoc mode, see the instructions included with your computer or contact your network administrator.

**Network Name (SSID)**

---

Communication Mode	Encryption Mode	Network Key
Ad-Hoc	NONE	-
	WEP	

For example:

**Network Name (SSID)**

HELLO

---

Communication Mode	Encryption Mode	Network Key
Ad-Hoc	WEP	12345

**NOTE:** Your Dell machine supports the use of the first WEP key only.

2. Press ▲ or ▼ to select the **Network** option, and then press **OK**.
3. Press ▲ or ▼ to select the **WLAN** option, and then press **OK**.
4. Press ▲ or ▼ to select the **Setup Wizard** option, and then press **OK**.
5. When **WLAN Enable?** appears, press ▲ to select **On**.  
This will start the wireless setup wizard. To cancel, press **Back**.
6. The machine will search for your network and display a list of available SSIDs. When a list of SSIDs appears, press ▲ or ▼ to select the SSID you want.
7. Press **OK**.
8. Enter the WEP key, and then press **OK**.  
To apply the settings, press p. To cancel, press ▼.

**NOTE:** Your Dell machine supports the use of the first WEP key only.

9. The machine will attempt to connect to the wireless device you have selected.

If your wireless device is connected successfully, the machine's LCD displays **Connected**. The machine will print your machine's wireless status report. If the connection fails, check the error code on the printed report.

**NOTE:** If the connection fails, your machine reverts to a wired network interface.

For Windows®:

You have completed the wireless network setup. Install drivers and software necessary for operating your device from the Installer CD-ROM.

For Macintosh:

You have completed the wireless network setup. To install drivers and software necessary for operating your device, double-click "StartHereOS X.app" in the installation CD-ROM.

## Configure Your Machine for a Wireless Network Using the Machine's Control Panel Setup Wizard

---

Before configuring your machine, we recommend writing down your wireless network settings. You will need this information before you continue with the configuration.

---

1. Check and record the current wireless network settings of the computer to which you are connecting.

**Network Name (SSID)**

---

**Network Key**

---

For example:

**Network Name (SSID)**

---

HELLO

---

---

**Network Key**

---

12345

---

**NOTE:** Your access point/router may support the use of multiple WEP keys, however your Dell machine supports the use of the first WEP key only.

**NOTE:** If you need assistance during setup and want to contact Dell Customer Service, make sure you have your SSID (Network Name) and Network Key ready. We cannot assist you in locating this information.

**NOTE:** If you do not know this information (SSID and Network Key), you cannot continue the wireless setup.

**How can I find this information?**

- Check the documentation provided with your wireless access point/router.
- The initial SSID could be the manufacturer's name or the model name.
- If you do not know the security information, please consult the router manufacture, your system administrator, or your Internet provider.

2. Press ▲ or ▼ to select the **Network** option, and then press **OK**.

3. Press ▲ or ▼ to select the **WLAN** option, and then press **OK**.

4. Press ▲ or ▼ to select the **Setup Wizard** option, and then press **OK**.

5. When **WLAN Enable?** appears, press ▲ to select **On**.

This will start the wireless setup wizard. To cancel, press **Back**.

6. The machine will search for your network and display a list of available SSIDs. When a list of SSIDs appears, press ▲ or ▼ to select the SSID you want.

7. Press **OK**.

8. Do one of the following:

- If you are using an authentication and encryption method that requires a Network Key, enter the Network Key you wrote down in the first step.

Enter the WEP key, and then press **OK** to apply your settings.

To apply the settings, press **p**. To cancel, press ▼.

- If your authentication method is Open System and your encryption mode is None, go to the next step.
- If your WLAN access point/router supports WPS, **WPS is available** appears. To connect your machine using the automatic wireless mode, press **p**. (If you choose **No**, enter the Network Key you wrote down in the first step.) When **Press WPS on rtr** appears, press the WPS button on your WLAN access point/router, and then press ▼ twice.

9. The machine attempts to connect to the wireless device you have selected.

If your wireless device is connected successfully, the machine's LCD displays **Connected**. The machine will print your machine's wireless status report. If the connection fails, check the error code on the printed report.

**NOTE:** If the connection fails, your machine reverts to a wired network interface.

For Windows®:

You have completed the wireless network setup. Install drivers and software necessary for operating your device from the Installer CD-ROM.

For Macintosh:

You have completed the wireless network setup. To install drivers and software necessary for operating your device, double-click "StartHereOS X.app" in the installation CD-ROM.

## Configure Your Machine for a Wireless Network When the SSID Is Not Broadcast

Before configuring your machine, we recommend writing down your wireless network settings. You will need this information before you continue with the configuration.

1. Check and record the current wireless network settings.

**Network Name (SSID)**

Communication Mode	Authentication Method	Encryption Mode	Network Key
Infrastructure	Open System	NONE	-
		WEP	
	Shared Key	WEP	
		WPA/WPA2-PSK	AES TKIP (TKIP is supported for WPA-PSK only.)

For example:

**Network Name (SSID)**

HELLO

Communication Mode	Authentication Method	Encryption Mode	Network Key
Infrastructure	WPA2-PSK	AES	12345678

**NOTE:** If your router uses WEP encryption, enter the key used as the first WEP key. Your Dell machine supports the use of the first WEP key only.

2. Press ▲ or ▼ to select the **Network** option, and then press **OK**.
3. Press ▲ or ▼ to select the **WLAN** option, and then press **OK**.
4. Press ▲ or ▼ to select the **Setup Wizard** option, and then press **OK**.
5. When **WLAN Enable?** appears, press ▲ to select **On**.  
This will start the wireless setup wizard. To cancel, press **Back**.
6. The machine will search for your network and display a list of available SSIDs. Press ▲ or ▼ to select the **<New SSID>** option, and then press **OK**.
7. Enter the SSID name, and then press **OK**.
8. Press ▲ or ▼ to select the **Infrastructure** option, and then press **OK**.
9. Press ▲ or ▼ to select the **Authentication Method** you want, and then press **OK**.
10. Do one of the following:
  - If you selected the **Open System** option, press ▲ or ▼ to select the **Encryption Type None or WEP**, and

then press **OK**.

If you selected the WEP option for Encryption Type, enter the WEP key, and then press **OK**.

- If you selected the Shared Key option, enter the WEP key, and then press **OK**.
- If you selected the WPA/WPA2-PSK option, press ▲ or ▼ to select the Encryption Type TKIP+AES or AES , and then press **OK**.

Enter the WPA key, and then press **OK**.

**NOTE:** Your Dell machine supports the use of the first WEP key only.

**11.** To apply the settings, press p. To cancel, press ▼ .

**12.** The machine will attempt to connect to the wireless device you have selected.

If your wireless device is connected successfully, the machine's LCD displays *Connected*. The machine will print your machine's wireless status report. If the connection fails, check the error code on the printed report.

**NOTE:** If the connection fails, your machine reverts to a wired network interface.

For Windows®:

You have completed the wireless network setup. Install drivers and software necessary for operating your device from the Installer CD-ROM.

For Macintosh:

You have completed the wireless network setup. To install drivers and software necessary for operating your device, double-click "StartHereOS X.app" in the installation CD-ROM.

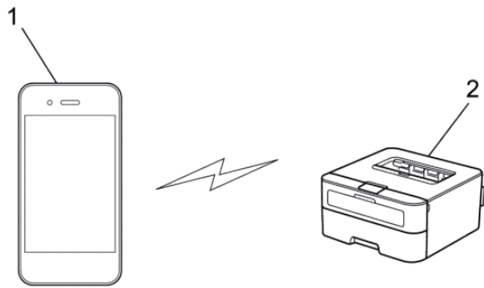
## Use Wi-Fi Direct™

- Print from Your Mobile Device Using Wi-Fi Direct
- Mobile Printing
- Configure Your Wi-Fi Direct Network  
Configure your Wi-Fi Direct network settings from your machine's control panel.
- I Cannot Complete the Wireless Network Setup Configuration.

## Print from Your Mobile Device Using Wi-Fi Direct

Wi-Fi Direct is one of the wireless configuration methods developed by the Wi-Fi Alliance®. It allows you to configure a secured wireless network between your Dell machine and a mobile device, such as an Android™ device, Windows®Phone device, iPhone, iPod touch, or iPad, without using an access point. Wi-Fi Direct supports wireless network configuration using the one-push or PIN Method of Wi-Fi Protected Setup™ (WPS). You can also configure a wireless network by manually setting an SSID and password. Your Dell machine's Wi-Fi Direct feature supports WPA2™ security with AES encryption.





1. Mobile device
2. Your Dell machine

**NOTE:** Although the Dell machine can be used in both a wired and wireless network, only one connection method can be used at a time. However, a wireless network connection and Wi-Fi Direct connection, or a wired network connection (supported models only) and Wi-Fi Direct connection can be used at the same time.

**NOTE:** The Wi-Fi Direct-supported device can become a Group Owner (G/O). When configuring the Wi-Fi Direct network, the G/O serves as an access point.

## Mobile Printing

Your Dell Printer | E310dw supports printing from a variety of mobile devices. Easy to use and navigate, the application for Mobile Printing enables direct printing of photos, documents, web content and more, on supported Dell printers via Wi-Fi or Ethernet network.

### For Android™ Devices

Download the Dell Document Hub app for free from Google Play™. Easy to use and navigate, the Dell Document Hub app enables direct printing of photos, documents web content and more, to supported Dell printers on a Wi-Fi, Wi-Fi Direct, or Ethernet network.

Scan the QR Code® for quick access to the relevant application store.



## For iOS Devices

This printer is compatible with AirPrint. This printer is also compatible with Dell Document Hub App, available for free download from App Store.

Scan the QR Code for quick access to the relevant application store.



## Configure Your Wi-Fi Direct Network

Configure your Wi-Fi Direct network settings from your machine's control panel.

- Step-by-step Guide for Wi-Fi Direct Network Configuration

The following instructions offer five methods for configuring your Dell machine in a wireless network environment. Select the method you prefer for your environment.

- Configure Your Wi-Fi Direct Network Using the One-Push Method
- Configure Your Wi-Fi Direct Network Using the One-Push Method of Wi-Fi Protected Setup™ (WPS)
- Configure Your Wi-Fi Direct Network Using the PIN Method
- Configure Your Wi-Fi Direct Network Using the PIN Method of Wi-Fi Protected Setup™ (WPS)
- Configure Your Wi-Fi Direct Network Manually

### Step-by-step Guide for Wi-Fi Direct Network Configuration

The following instructions offer five methods for configuring your Dell machine in a wireless network environment. Select the method you prefer for your environment.

Check your mobile device for configuration.

#### 1. Does your mobile device support Wi-Fi Direct?

Option	Description
Yes	Go to Step 2
No	Go to Step 3

#### 2. Does your mobile device support one-push configuration for Wi-Fi Direct?

Option	Description
Yes	See <i>Related Information</i> : Configure Your Wi-Fi Direct Network Using the One-Push Method
No	See <i>Related Information</i> : Configure Your Wi-Fi Direct Network Using the PIN Method

#### 3. Does your mobile device support Wi-Fi Protected Setup™ (WPS)?

Option	Description
Yes	Go to Step 4
No	See <i>Related Information</i> : Configure Your Wi-Fi Direct Network Manually

#### 4. Does your mobile device support one-push configuration for Wi-Fi Protected Setup™ (WPS)?

Option	Description
Yes	See <i>Related Information</i> : Configure Your Wi-Fi Direct Network Using the One-Push Method and Wi-Fi Protected Setup™ (WPS)
No	See <i>Related Information</i> : Configure Your Wi-Fi Direct Network Using the PIN Method of Wi-Fi Protected Setup™ (WPS)

To use Mobile Printing functionality in a Wi-Fi Direct network configured by one-push configuration using Wi-Fi Direct or by PIN Method configuration using Wi-Fi Direct, the device you use to configure Wi-Fi Direct must be running Android™ 4.0 or greater.

#### Configure Your Wi-Fi Direct Network Using the One-Push Method

If your mobile device supports Wi-Fi Direct, follow these steps to configure a Wi-Fi Direct network:

1. Press ▲ or ▼ to select the `Network` option, and then press **OK**.
2. Press ▲ or ▼ to select the `Wi-Fi Direct` option, and then press **OK**.
3. Press ▲ or ▼ to select the `Push Button` option, and then press **OK**.
4. When `Wi-Fi Direct On?` appears, press ▲ to accept. To cancel, press ▼.
5. Activate Wi-Fi Direct on your mobile device (see your mobile device's user's guide for instructions) when `Activate Wi-Fi Direct on other device` and press **OK**. `appears on the machine's LCD`. Press **OK** on your machine.  
This will start the Wi-Fi Direct setup. To cancel, press **Back**.
6. Do one of the following:
  - When your Dell machine is the Group Owner (G/O), connect your mobile device to the machine directly.
  - When your Dell machine is not the G/O, it will display available device names with which to configure a Wi-Fi Direct network. Press ▲ or ▼ to select the mobile device you want to connect to and press **OK**. Search for available devices again by pressing `Rescan`.
7. If your mobile device connects successfully, the machine's LCD displays `Connected`. You have completed the Wi-Fi Direct network setup.

#### Configure Your Wi-Fi Direct Network Using the One-Push Method of Wi-Fi Protected Setup™ (WPS)

If your mobile device supports WPS (PBC; Push Button Configuration), follow these steps to configure a Wi-Fi Direct network:

1. Press ▲ or ▼ to select the `Network` option, and then press **OK**.
2. Press ▲ or ▼ to select the `Wi-Fi Direct` option, and then press **OK**.
3. Press ▲ or ▼ to select the `Group Owner` option, and then press **OK**.
4. Press ▲ or ▼ to select the `On` option, and then press **OK**.
5. Press ▲ or ▼ to select the `Push Button` option, and then press **OK**.
6. When `Wi-Fi Direct On?` appears, press ▲ to accept. To cancel, press ▼.
7. Activate your mobile device's WPS one-push configuration method (see your mobile device's user's guide for instructions) when `Activate Wi-Fi Direct on other device` and press **OK**. `appears on the`

machine's LCD. Press **OK** on your machine.

This will start the Wi-Fi Direct setup. To cancel, press **Back**.

8. If your mobile device connects successfully, the machine's LCD displays `Connected`. You have completed the Wi-Fi Direct network setup.

### Configure Your Wi-Fi Direct Network Using the PIN Method

If your mobile device supports the PIN Method of Wi-Fi Direct, follow these steps to configure a Wi-Fi Direct network:

1. Press **▲** or **▼** to select the `Network` option, and then press **OK**.
2. Press **▲** or **▼** to select the `Wi-Fi Direct` option, and then press **OK**.
3. Press **▲** or **▼** to select the `PIN Code` option, and then press **OK**.
4. When `Wi-Fi Direct On?` appears, press **▲** to accept. To cancel, press **▼**.
5. Activate Wi-Fi Direct on your mobile device (see your mobile device's user's guide for instructions) when `Activate Wi-Fi Direct on other device` and press `OK` appears on the machine's LCD. Press **OK** on your machine.

This will start the Wi-Fi Direct setup. To cancel, press **Back**.

6. Do one of the following:
  - When your machine is the Group Owner (G/O), it will wait for a connection request from your mobile device. When `Input PIN Code` appears, enter the PIN displayed on your mobile device in your machine. Press **OK** to complete the setup.  
If the PIN is displayed on your machine, enter the PIN in your mobile device.
  - When your machine is not the G/O, it will display available device names with which to configure a Wi-Fi Direct network. Press **▲** or **▼** to select the mobile device you want to connect to and press **OK**. Search for available devices again by pressing `Rescan`, and then go to the next step.
7. Do one of the following:
  - Press **▲** to display the PIN on your machine, enter the PIN in your mobile device, and then go to the next step.
  - Press **▼** to enter the PIN displayed by your mobile device in your machine. Press **OK**, and then go to the next step.
8. If your mobile device connects successfully, the machine's LCD displays `Connected`. You have completed the Wi-Fi Direct network setup.

### Configure Your Wi-Fi Direct Network Using the PIN Method of Wi-Fi Protected Setup™ (WPS)

If your mobile device supports the PIN Method of Wi-Fi Protected Setup™ (WPS), follow these steps to configure a Wi-Fi Direct network.

1. Press **▲** or **▼** to select the `Network` option, and then press **OK**.
2. Press **▲** or **▼** to select the `Wi-Fi Direct` option, and then press **OK**.
3. Press **▲** or **▼** to select the `Group Owner` option, and then press **OK**.
4. Press **▲** or **▼** to select the `On` option, and then press **OK**.

5. Press ▲ or ▼ to select the `PIN Code` option, and then press **OK**.
6. When `Wi-Fi Direct On?` appears, press ▲ to accept. To cancel, press ▼ .
7. Activate your mobile device's WPS PIN configuration method (see your mobile device's user's guide for instructions) when `Activate Wi-Fi Direct on other device` and press **OK**. `appears` on the machine's LCD. Press **OK** on your machine.  
This will start the Wi-Fi Direct setup. To cancel, press `Back`.
8. The machine will wait for a connection request from your mobile device. When `Input PIN Code` appears, enter the PIN displayed on your mobile device in the machine.
9. Press **OK**.
10. If your mobile device connects successfully, the machine's LCD displays `Connected`. You have completed the Wi-Fi Direct network setup.

### Configure Your Wi-Fi Direct Network Manually

If your mobile device does not support Wi-Fi Direct or WPS, you must configure a Wi-Fi Direct network manually.

1. Press ▲ or ▼ to select the `Network` option, and then press **OK**.
2. Press ▲ or ▼ to select the `Wi-Fi Direct` option, and then press **OK**.
3. Press ▲ or ▼ to select the `Manual` option, and then press **OK**.
4. When `Wi-Fi Direct On?` appears, press ▲ to accept. To cancel, press ▼ .
5. The machine will display the SSID name and Password for two minutes. Go to your mobile device's wireless network settings screen and enter the SSID name and password.
6. If your mobile device connects successfully, the machine's LCD displays `Connected`. You have completed the Wi-Fi Direct network setup.

## Advanced Network Features

- Print the Network Configuration Report

The Network Configuration Report lists the current network configuration, including the network print server settings.

### Print the Network Configuration Report

The Network Configuration Report lists the current network configuration, including the network print server settings.

**NOTE:** Node Name: The Node Name appears on the current Network Configuration Report. The default Node Name is "DELLxxxxxx" (where "xxxxxx" is the first six digits of your machine's MAC Address / Ethernet Address.)

**NOTE:** If the IP Address on the Network Configuration Report shows 0.0.0.0, wait for one minute and try printing it again.

**NOTE:** You can find your machine's settings, such as IP address, subnet mask, node name, and MAC Address on the report, for example:

- IP address: 192.168.0.5
- Subnet mask: 255.255.255.0
- Node name: DELL000499
- MAC Address: 00-0c-a0-00-04-99

1. Press ▲ or ▼ to select the `Machine Info.` option, and then press **OK**.
2. Press ▲ or ▼ to select `Print NetSetting`.
3. Press **OK**.

## Technical Information for Advanced Users

- Additional Network Settings for Windows®
- Available Services

When you want your computer to print to the Dell print server, you must use a resource, also known as a 'service.' The Dell print server provides these predefined services:

- Other Ways to Configure the IP Address
- Reset the Network Settings to the Factory Settings

You can use your machine's control panel to reset the print server to its default factory settings. This resets all information, such as the password and IP address.

- Print the WLAN Report

The WLAN Report reflects your machine's wireless status. If the wireless connection fails, check the error code on the printed report.

## Additional Network Settings for Windows®

- Before Configuring Additional Network Settings
- Use Web Services to Install Drivers Used for Printing (Windows Vista®, Windows®7 and Windows®8)  
Use Web Services to monitor printers on the network.
- Use Web Services to Uninstall Drivers Used for Printing (Windows Vista®, Windows®7 and Windows®8)
- Install Drivers Used for Printing for Infrastructure Mode When Using Vertical Pairing (Windows®7 and Windows®8)

Windows®Vertical Pairing is a technology that allows your Vertical Pairing-supported wireless machine to connect to your Infrastructure network using the PIN Method of WPS and the Web Services feature. It enables printer driver installation from the printer icon in the **Add a device** screen. If you are in Infrastructure mode, you can connect your machine to the wireless network, and then install the printer driver using this feature.

- Install Drivers Used for Printing for the Wi-Fi Direct Network When Using Vertical Pairing (Windows®8.1)  
Windows®8.1 allows your Vertical Pairing-supported wireless machine to connect to the Wi-Fi Direct network using the one-push or PIN Method of WPS and the Web Services feature. It enables printer driver installation from the printer icon in the **Add a device** screen. You can connect your machine to the Wi-Fi Direct network, and then install the printer driver using this feature. Your machine also supports the Persistent Group feature of Vertical Pairing for Windows®8.1.

## Before Configuring Additional Network Settings

Use one of the following features to configure additional network settings:

- Web Services for printing (Windows Vista®, Windows®7 and Windows®8)
- Vertical Pairing (Windows®7 and Windows®8)

## Use Web Services to Install Drivers Used for Printing (Windows Vista®, Windows®7 and Windows®8)

Use Web Services to monitor printers on the network.

- 
- Verify that the host computer and the Dell machine are on the same subnet, or that the router is correctly configured to pass data between the two devices.
  - You must configure the IP address on your Dell machine before you configure this setting.
  - For Windows Server®2008, Windows Server®2012 and Windows Server®2012 R2, you must install Print Services.
- 

1. Insert the Installer CD-ROM.
2. Open Windows®Explorer, and navigate to your CD-ROM drive, and then select **install > bin > ComDLL > Data**.
3. Double-click **PnPDrvInst.exe** or **dpinstx86.exe**.
4. If the **User Account Control** screen appears, do one of the following:
  - (Windows Vista®)  
Click **Allow**.
  - (Windows®7/Windows®8)  
Click **Yes**.
5. Do one of the following:
  - (Windows Vista®)

Click  **(Start) > Network**.

The machine's Web Services Name appears with the printer icon.

Right-click the machine you want to install.

- (Windows®7)

Click  **(Start) > Control Panel > Network and Internet > View network computers and devices**.

The machine's Web Services Name appears with the printer icon.

Right-click the machine you want to install.

- (Windows®8)

Move your mouse to the lower right corner of your desktop. When the menu bar appears, click **Settings > Change PC settings > Devices > Add a device**.

The machine's Web Services Name appears.

- (Windows®8.1)

Move your mouse to the lower right corner of your desktop. When the menu bar appears, click **Settings > Change PC settings > PC & devices > Devices > Add a device**.

The machine's Web Services Name appears.

**NOTE:** The Web Services Name for the Dell machine is your model name and the MAC Address (Ethernet Address) of your machine (for example, Dell E310dw [XXXXXXXXXXXX] (MAC Address / Ethernet Address)).

**NOTE:** (Windows®8)

Move your mouse over the machine name to display the machine's information.

**6. Do one of the following:**

- (Windows Vista®/Windows®7)

Click **Install** in the machine's drop-down menu.

- (Windows®8)

Select the machine you want to install.

## Use Web Services to Uninstall Drivers Used for Printing (Windows Vista®, Windows®7 and Windows®8)

**1. Do one of the following:**

- (Windows Vista®)

Click  **(Start) > Network.**

- (Windows®7)

Click  **(Start) > Control Panel > Network and Internet > View network computers and devices.**

- (Windows®8)

Move your mouse to the lower right corner of your desktop. When the menu bar appears, click **Settings > Change PC settings > Devices.**

- (Windows®8.1)


Move your mouse to the lower right corner of your desktop. When the menu bar appears, click **Settings > Change PC settings > PC & devices > Devices.**

**2. Do one of the following:**

- (Windows Vista®/Windows®7)

The machine's Web Services Name will be shown with the printer icon. Right-click the machine you want to uninstall.

- (Windows®8)

The machine's Web Service Name will be shown. Select the machine you want to uninstall, and then click  (**Remove device**).

**3. Do one of the following:**

- (Windows Vista®/Windows®7)

Click **Uninstall** in the machine's drop-down menu.

- (Windows®8)

When the dialog box appears, follow the on-screen instruction.

## Install Drivers Used for Printing for Infrastructure Mode When Using Vertical Pairing (Windows®7



## and Windows®8)

Windows®Vertical Pairing is a technology that allows your Vertical Pairing-supported wireless machine to connect to your Infrastructure network using the PIN Method of WPS and the Web Services feature. It enables printer driver installation from the printer icon in the **Add a device** screen. If you are in Infrastructure mode, you can connect your machine to the wireless network, and then install the printer driver using this feature.

- 
- Verify that the host computer and the Dell machine are on the same subnet, or that the router is correctly configured to pass data between the two devices.
  - If you have disabled your machine's Web Services feature, you must re-enable it by selecting the Web Services check box and clicking **Submit**. The default setting of Web Services for the Dell machine is Enabled. You can change the Web Services setting using Web Based Management.
  - Make sure your wireless LAN access point/router has the Windows®7 or Windows®8 compatibility logo. If you are not sure about the compatibility logo, contact your access point/router manufacturer.
  - Make sure your computer has the Windows®7 or Windows®8 compatibility logo. If you are not sure about the compatibility logo, contact your computer manufacturer.
  - If you are configuring your wireless network using an external wireless Network Interface Card (NIC), make sure the wireless NIC has the Windows®7 or Windows®8 compatibility logo. For more information, contact your wireless NIC manufacturer.
  - To use a Windows®7 or a Windows®8 computer as a Registrar, you must register it to your network in advance. See the instructions supplied with your wireless LAN access point/router.
- 

1. Turn on your machine.
2. Set your machine to WPS mode (PIN Method).
3. Do one of the following:
  - (Windows®7)

Click  **(Start) > Devices and Printers > Add a device.**

- (Windows®8)

Move your mouse to the lower right corner of your desktop. When the menu bar appears, click **Settings > Control Panel > Hardware and Sound > Devices and Printers > Add a device.**

4. Select your machine and type the PIN.
5. Select the infrastructure network to which you want to connect, and then click **Next**.
6. When your machine appears in the **Devices and Printers** dialog box, the wireless configuration and the printer driver installation are successfully completed.

## Install Drivers Used for Printing for the Wi-Fi Direct Network When Using Vertical Pairing (Windows®8.1)

Windows®8.1 allows your Vertical Pairing-supported wireless machine to connect to the Wi-Fi Direct network using the one-push or PIN Method of WPS and the Web Services feature. It enables printer driver installation from the printer icon in the **Add a device** screen. You can connect your machine to the Wi-Fi Direct network, and then install

the printer driver using this feature. Your machine also supports the Persistent Group feature of Vertical Pairing for Windows®8.1.

- 
- If you have disabled your machine's Web Services feature, you must re-enable it by selecting the Web Services check box, and clicking **Submit**. The default setting of the Web Services for the Dell machine is Enabled. You can change the Web Services setting using Web Based Management.
  - Make sure your computer has the Windows®8.1 compatibility logo. If you are not sure about the compatibility logo, contact your computer manufacturer.
  - If you are configuring your wireless network using an external wireless Network Interface Card (NIC), make sure the wireless NIC has the Windows®8.1 compatibility logo. For more information, contact your wireless NIC manufacturer.
- 

1. Turn on your machine.
2. Enable your machine's Wi-Fi Direct feature.
3. Move your mouse to the lower right corner of your desktop. When the menu bar appears, click **Settings > Control Panel > Hardware and Sound > Devices and Printers > Add a device**.
4. Select your machine.  
**NOTE:** If your computer displays a dialog box that requires the WPS PIN, type the PIN displayed on your Dell machine's LCD, and then click **Next**.
5. Select the Wi-Fi Direct push button menu on your machine.
6. When your machine appears in the **Devices and Printers** dialog box, the wireless configuration and the printer driver installation are successfully completed.

## Available Services

When you want your computer to print to the Dell print server, you must use a resource, also known as a 'service.' The Dell print server provides these predefined services:

Service (Example)	Definition
BINARY_P1	TCP/IP binary
TEXT_P1	TCP/IP text service (adds carriage return after each line feed)
PCL_P1	PCL service (switches PjL-compatible machine to PCL mode)
DELLxxxxxx <sup>*1</sup>	TCP/IP binary

\*1 Where "xxxxxx" is the first six digits of your machine's MAC Address (Ethernet Address).

## Other Ways to Configure the IP Address

- Configure the IP Address Using DHCP
- Configure the IP Address Using BOOTP
- Configure the IP Address Using RARP
- Configure the IP Address Using APIPA
- Configure the IP Address Using ARP

## Configure the IP Address Using DHCP

The Dynamic Host Configuration Protocol (DHCP) is one of several automated mechanisms for IP address allocation. If you have a DHCP server on your network, the print server obtains its IP address from the DHCP server automatically and registers its name with any RFC 1001- and 1002-compliant dynamic name services.

**NOTE:** If you do not want your print server configured via DHCP, you must set the **Boot Method** to **Static** so that the print server has a static IP address. This will prevent the print server from trying to obtain an IP address from any of these systems.

To change the **Boot Method**, use the machine's control panel `Network` menu, or **Web Based Management**.

## Configure the IP Address Using BOOTP

Before you configure the IP address using Bootstrap Protocol (BOOTP), you must set the machine's **Boot Method** to **BOOTP**. To change the **Boot Method**, use the machine's control panel `Network` menu.

BOOTP is an alternative to Reverse Address Resolution Protocol (RARP) that has the advantage of allowing configuration of the subnet mask and gateway. To use BOOTP to configure the IP address, make sure BOOTP is installed and running on your host computer (it should appear in the `/etc/services` file on your host as a real service; type `man bootpd` or see your system documentation for information). BOOTP is usually started up via the `/etc/inetd.conf` file, so you may need to enable it by removing the `"#"` in front of the `bootp` entry in that file.

For example, a typical `bootp` entry in the `/etc/inetd.conf` file would be:

```
#bootp dgram udp wait /usr/etc/bootpd bootpd -i
```

Depending on the system, this entry might be called "bootps" instead of "bootp".

**NOTE:** To enable BOOTP, use an editor to delete the `"#"` (if there is no `"#"`, then BOOTP is already enabled). Then edit the BOOTP configuration file (usually `/etc/bootptab`) and enter the name, network type (1 for Ethernet), **MAC Address** (Ethernet Address) and the IP address, subnet mask and gateway of the print server. Unfortunately, the exact format for doing this is not standardized, so you will need to see your system documentation to determine how to enter this information (many UNIX® systems also have template examples in the `bootptab` file that you can use for reference). Some examples of typical `/etc/bootptab` entries include:

```
DELL310107 1 00:80:77:31:01:07 192.168.1.2
```

and:

```
DELL310107:ht=ethernet:ha=008077310107:\ip=192.168.1.2:
```

Certain BOOTP host software implementations will not respond to BOOTP requests if you have not included a download filename in the configuration file. If this is the case, create a null file on the host and specify the name of this file and its path in the configuration file.

As with RARP, the print server will load its IP address from the BOOTP server when the machine is powered on.

## Configure the IP Address Using RARP

Before you configure the IP address using Reverse Address Resolution Protocol (RARP), you must set the machine's **Boot Method** to **RARP**. To change the **Boot Method**, use the machine's control panel, or **Web Based Management**.

The Dell print server's IP address can be configured using the RARP facility on your host computer. This is done by editing the `/etc/ethers` file (if this file does not exist, you can create it) with an entry similar to the following:

```
00:80:77:31:01:07 DELL008077310107 (or DELL008077310107 for a wireless network)
```

where the first entry is the MAC Address (Ethernet Address) of the print server and the second entry is the name of the print server. (The name must be the same as the one you put in the `/etc/hosts` file.)

If the RARP daemon is not already running, start it (depending on the system, the command can be `rarpd`, `rarpd -a`, `in.rarpd -a`, or another command; type `man rarpd` or see your system documentation for additional information).

To verify that the RARP daemon is running on a Berkeley UNIX®-based system, type the following command:

```
ps -ax | grep -v grep | grep rarpd
```

For AT&T UNIX®-based systems, type:

```
ps -ef | grep -v grep | grep rarpd
```

The Dell print server will get the IP address from the RARP daemon when the machine is powered on.

## Configure the IP Address Using APIPA

The Dell print server supports the Automatic Private IP Addressing (APIPA) protocol. With APIPA, DHCP clients automatically configure an IP address and subnet mask when a DHCP server is not available. The device selects its own IP address in the range 169.254.1.0 through 169.254.254.255. The subnet mask is automatically set to 255.255.0.0 and the gateway address is set to 0.0.0.0.

By default, the APIPA protocol is enabled. To disable the APIPA protocol, use the machine's control panel, or Web Based Management.

## Configure the IP Address Using ARP

If your network does not use a DHCP server, you can also use the Address Resolution Protocol (ARP) command. The ARP command is available on Windows®-systems that have TCP/IP installed and UNIX®-systems. To use ARP, type the following command:

```
arp -s ipaddress ethernetaddress  
ipaddress
```

Where `ethernetaddress` is the MAC Address (Ethernet Address) of the print server and `ipaddress` is the IP address of the print server.

For example:

### Windows®-systems

Windows®-systems require the hyphen (dash) "-" character between each digit of the MAC Address (Ethernet Address).

```
arp -s 192.168.1.2 00-80-77-31-01-07  
ping 192.168.1.2
```

### UNIX®/Linux systems

Typically, UNIX® and Linux systems require the colon ":" character between each digit of the MAC Address (Ethernet Address).

```
arp -s 192.168.1.2 00:80:77:31:01:07  
ping 192.168.1.2
```

**NOTE:** You must be on the same Ethernet segment to use the ARP command, that is, there cannot be a router between the print server and operating system.

If there is a router, you may use BOOTP or other methods to enter the IP address. If your administrator has configured the system to deliver IP addresses using BOOTP, DHCP, or RARP, your Dell print server can receive an IP address from

any one of these IP address allocation systems, so you will not need to use the ARP command. The ARP command works only once. For security reasons, when you have successfully configured the IP address of a Dell print server using the ARP command, you cannot use the ARP command again to change the address. The print server will ignore any attempts to do this. To change the IP address again, use Web Based Management, TELNET (using the SET IP ADDRESS command), or perform a factory reset on the print server, which will then allow you to use the ARP command again.

## Reset the Network Settings to the Factory Settings

You can use your machine's control panel to reset the print server to its default factory settings. This resets all information, such as the password and IP address.

**NOTE:** This feature restores all wired and wireless network settings to the factory settings.

**NOTE:** You can also reset the print server to its factory settings using Web Based Management.

1. Press ▲ or ▼ to select the `Network` option, and then press **OK**.
2. Press ▲ or ▼ to select the `Network Reset` option, and then press **OK**.
3. Press ▲ for `Yes`.  
The machine will restart.

## Print the WLAN Report

The WLAN Report reflects your machine's wireless status. If the wireless connection fails, check the error code on the printed report.

1. Press ▲ or ▼ to select the `Machine Info.` option, and then press **OK**.
2. Press ▲ or ▼ to select the `Print WLANReport` option, and then press **OK**.  
The machine will print the WLAN Report.

## Wireless LAN Report Error Codes

If the Wireless LAN Report shows that the connection failed, check the error code on the printed report and refer to the corresponding instructions in the table:

Error Code	Problem and Recommended Solutions
TS-01	The wireless setting is not activated, turn the wireless setting to ON. If a network cable is connected to your machine, disconnect it and turn the wireless setting of your machine to ON.

TS-02	<p>The wireless access point/router cannot be detected.</p> <ol style="list-style-type: none"> <li>Check the following four points: <ul style="list-style-type: none"> <li>Make sure that the wireless access point/router is powered on.</li> <li>Move your machine to an obstruction-free area, or closer to the wireless access point/router.</li> <li>Temporarily place your machine within about 3.3 feet (one meter) from the wireless access point when you are configuring the wireless settings.</li> <li>If your wireless access point/router is using MAC address filtering, confirm the MAC address of the Dell machine is allowed in the filter.</li> </ul> </li> <li>If you manually entered the SSID and security information (SSID/authentication method/encryption method/Network Key), the information may be incorrect. Confirm the SSID and security information and enter the correct information as necessary.</li> </ol>
TS-04	<p>The Authentication/Encryption methods used by the selected wireless access point/router are not supported by your machine. For infrastructure mode, change the authentication and encryption methods of the wireless access point/router. Your machine supports the following authentication methods:</p> <ul style="list-style-type: none"> <li>WPA-Personal TKIP or AES</li> <li>WPA2-Personal AES</li> <li>Open WEP or None (without encryption)</li> <li>Shared key WEP</li> </ul> <p>If your problem is not solved, the SSID or network settings you entered may be incorrect. Confirm the wireless network settings. For Ad-Hoc Mode, change the authentication and encryption methods of your computer for the wireless setting. Your machine supports Open authentication method only, with optional WEP encryption.</p>
TS-05	<p>The security information (SSID/Network Key) is incorrect. Confirm the SSID and Network Key. If your router uses WEP encryption, enter the key used as the first WEP key. Your Dell machine supports the use of the first WEP key only.</p>
TS-06	<p>The wireless security information (Authentication method/Encryption method/Network Key) is incorrect. Confirm the wireless security information (Authentication method/Encryption method/Network Key) listed in TS-04. If your router uses WEP encryption, enter the key used as the first WEP key. Your Dell machine supports the use of the first WEP key only.</p>
TS-07	<p>The machine cannot detect a wireless access point/router that has WPS or AOSS™ enabled. If you would like to configure your wireless settings using WPS or AOSS™, you must operate both your machine and the wireless access point/router. Confirm your wireless access point/router supports WPS or AOSS™ and try starting again. If you do not know how to operate your wireless access point/router using WPS or AOSS™ see the documentation provided with your wireless access point/router, ask the manufacturer of your wireless access point/router or ask your network administrator.</p>
TS-08	<p>Two or more wireless access points that have WPS or AOSS™ enabled are detected.</p> <ul style="list-style-type: none"> <li>Confirm that only one wireless access point/router within range has the WPS or AOSS™ method active and try again.</li> <li>Try starting again after a few minutes in order to avoid interference from other access points.</li> </ul>

# Network Menu on the Dell Control Panel

The control panel's **Network** menu selections allow you to configure the Dell machine for your network.

Note that your Dell machine includes the Web Based Management, which you can use to configure many aspects of the network.

## TCP/IP

If you connect the machine to your network with a network cable, use the **Wired LAN** menu selections. If you connect the machine to a wireless Ethernet network, use the **WLAN** menu selections.

### Boot Method

This selection controls how the machine obtains an IP address.

#### Auto

In this mode, the machine will scan the network for a DHCP server. If it can find one, and if the DHCP server is configured to allocate an IP address to the machine, then the IP address supplied by the DHCP server will be used.

If no DHCP server is available, the IP Address is set using the APIPA protocol. After the machine is initially powered ON, it may take a few minutes for the machine to scan the network for a server.

#### Static

In this mode, the machine's IP address must be manually assigned. When the IP address is entered, it is locked to the assigned address.

If you do not want your print server configured via DHCP, BOOTP, or RARP, you must set the BOOT Method to Static so that the print server has a static IP address. This will prevent the print server from trying to obtain an IP address from any of these systems.

To change the BOOT Method, use the machine's control panel, or Web Based Management.

### IP Address

This field displays the current IP address of the machine. If you have selected a BOOT Method of Static, type the IP address that you wish to assign to the machine (check with your network administrator for the IP address to use). If you have selected a method other than Static, the machine will attempt to determine its IP address using the DHCP, BOOTP, or RARP protocols.

The default IP address of your machine will probably be incompatible with the IP address numbering scheme of your network. We recommend contacting your network administrator for an IP address that is compatible with the network to which your machine is connected.

### Subnet Mask

This field displays the current subnet mask used by the machine. If you are not using DHCP, BOOTP, or RARP to obtain the subnet mask, type the desired subnet mask. Check with your network administrator for the subnet mask to use.

### Gateway

This field displays the current gateway or router address used by the machine. If you are not using DHCP, BOOTP, or RARP to obtain the gateway or router address, type the address you wish to assign. If you do not have a gateway or router, leave this field blank. Check with your network administrator if you are unsure.

### IP Boot Tries

This field displays the number of attempts the machine will try to obtain an IP address when the Boot Method is set

to any setting except Static.

### **APIPA**

Selecting **On** will cause the print server to automatically allocate a link-local IP address in the range (169.254.1.0 - 169.254.254.255) when the print server cannot obtain an IP address through the Boot Method you have set. Selecting **Off** means the IP address does not change when the print server cannot obtain an IP address through the Boot Method you have set.

### **IPv6**

This machine is compatible with IPv6, the next generation Internet protocol. The default setting is **Off**. If you want to use the IPv6 protocol, select **On**.

**NOTE:** If you set **IPv6** to **On**, turn off the power switch, and then turn it back on to enable this protocol.

**NOTE:** After you set **IPv6** to **On**, this setting will be applied to both the wired and wireless LAN interface.

## **Ethernet (Wired Network Only)**

**NOTE:** If you set this value incorrectly, you may not be able to communicate with your print server.

## **Wired Status**

This field displays the current wired network status.

## **MAC Address**

The MAC Address (Ethernet Address) is a unique number assigned for the machine's network interface. You can check your machine's MAC Address on its control panel.

## **WLAN Assistant (Wireless Network Only)**

This feature guides you through the wireless network configuration using the Setup Wizard.

## **Setup Wizard (Wireless Network Only)**

The Setup Wizard guides you through the wireless network configuration.

## **WPS/AOSS™ (Wireless Network Only)**

If your wireless LAN access point/router supports either WPS (PBC) or AOSS™ (automatic wireless mode), you can configure your Dell machine without a computer.

**NOTE:** WPS refers to Wi-Fi Protected Setup™.

**NOTE:** PBC refers to Push Button Configuration.

**NOTE:** AOSS™ refers to AirStation One-Touch Secure System.



## WPS w/PIN Code (Wireless Network Only)

If your wireless LAN access point/router supports WPS (PIN method), you can configure your Dell machine without a computer.

**NOTE:** WPS refers to Wi-Fi Protected Setup™.

## WLAN Status (Wireless Network Only)

### Status

This field displays the current wireless network status.

### Signal

This field displays the current wireless network signal strength.

### Channel

This field displays the current wireless network channel.

### Speed

This field displays the current wireless network speed.

### SSID

This field displays the current wireless network SSID. The display shows up to 32 characters of the SSID name.

### Comm.Mode

This field displays the current wireless network communication mode.

## Set to Default

Select the `Set to Default` option to reset each wired or wireless setting to the factory default.

## Wired Enable (Wired Network Only)

Set the `Wired Enable` option to `On` when you want to use a wired network connection.

## WLAN Enable (Wireless Network Only)

Set the `WLAN Enable` option to `On` when you want to use a wireless network connection.

## Wi-Fi Direct

This type of connection is a Wi-Fi standard that allows devices to connect with each other without a wireless access point, using secured method.

## Network Reset

Select the `Network Reset` option to reset the print server to its default factory settings.



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# Security

- **Lock the Machine Settings**  
Before turning on the machine's access lock feature, make a careful note of your password. If you forget the password, you must reset all passwords stored in the machine by calling your administrator or Dell Customer Service.
- **Before Using Network Security Features**  
Your Dell machine employs some of the latest network security and encryption protocols available today. These network features can be integrated into your overall network security plan to help protect your data and prevent unauthorized access to the machine.
- **Supported Security Protocols and Features**
- **Send an Email Securely**

## Lock the Machine Settings

Before turning on the machine's access lock feature, make a careful note of your password. If you forget the password, you must reset all passwords stored in the machine by calling your administrator or Dell Customer Service.

- **About Using Setting Lock**  
Block unauthorized access to machine settings.

## About Using Setting Lock

Block unauthorized access to machine settings.

When Setting Lock is set to On , you cannot access the machine settings without entering the password.

## Set the Setting Lock Password

1. Press ▲ or ▼ to select the `General Setup` option, and then press **OK**.
2. Press ▲ or ▼ to select the `Setting Lock` option, and then press **OK**.
3. Enter a four-digit number for the password.  
To enter each digit, press ▲ or ▼ to select a number, and then press **OK**.
4. When the LCD displays `Verify:` , re-enter the password.
5. Press **OK**.

## Change the Setting Lock Password

1. Press ▲ or ▼ to select the `General Setup` option, and then press **OK**.
2. Press ▲ or ▼ to select the `Setting Lock` option, and then press **OK**.
3. Press ▲ or ▼ to select the `Set Password` option, and then press **OK**.
4. Enter the current four-digit password.  
To enter each digit, press ▲ or ▼ to select a number, and then press **OK**.
5. Enter a new four-digit password.

To enter each digit, press ▲ or ▼ to select a number, and then press **OK**.

6. When the LCD displays `Verify:`, re-enter the password.
7. Press **OK**.

### Turn Setting Lock On or Off

- Turn Setting Lock On
- Turn Setting Lock Off

#### Turn Setting Lock On

1. Press ▲ or ▼ to select the `General Setup` option, and then press **OK**.
2. Press ▲ or ▼ to select the `Setting Lock` option, and then press **OK**.
3. Press **OK** when the LCD displays `On`.
4. Enter the current four-digit password.  
To enter each digit, press ▲ or ▼ to select a number, and then press **OK**.

#### Turn Setting Lock Off

1. Press ▲ or ▼ to select the `General Setup` option, and then press **OK**.
2. Press ▲ or ▼ to select the `Setting Lock` option, and then press **OK**.
3. Enter the current four-digit password.  
To enter each digit, press ▲ or ▼ to select a number, and then press **OK**.
4. Press **OK** when the LCD shows `Off`.

## Before Using Network Security Features

Your Dell machine employs some of the latest network security and encryption protocols available today. These network features can be integrated into your overall network security plan to help protect your data and prevent unauthorized access to the machine.

**NOTE:** We recommend disabling the Telnet, FTP and TFTP protocols. Accessing the machine using these protocols is not secure.

## Supported Security Protocols and Features

- Security Methods for Sending Email
- Manage Your Network Machine Securely Using Web Based Management (Web Browser)  
To manage your network machine securely, you must use the management utilities with security protocols.

### Security Methods for Sending Email

**NOTE:** Configure the settings for these security methods using Web Based Management.


#### SMTP Authentication (SMTP-AUTH)

SMTP-AUTH expands SMTP (the Internet email sending protocol) to include an authentication method that ensures that the true identity of the sender is known.

## Manage Your Network Machine Securely Using Web Based Management (Web Browser)

To manage your network machine securely, you must use the management utilities with security protocols.

1. Start your web browser.
2. Type "http://machine's IP address" in your browser's address bar (where "machine's IP address" is the machine's IP address).

3. No password is required by default. Type a password if you have set one, and then click .

**NOTE:** If you use the SNMPv3 protocol, follow the steps below.

4. Click the **Network** tab.
5. Click **Protocol**.
6. Make sure the **SNMP** setting is enabled, and then click **Advanced Setting of SNMP**.
7. You can configure the SNMP settings.

We have three selections for **SNMP Mode of Operation**.

- **SNMP v1/v2c read-write access**

In this mode, the print server uses version 1 and version 2c of the SNMP protocol. You can use all Dell applications under this mode. However, it is not secure since it will not authenticate the user and the data will not be encrypted.

- **SNMPv3 read-write access and v1/v2c read-only access**

In this mode, the print server uses the read-write access of version 3 and the read-only access of version 1 and version 2c of the SNMP protocol.

**NOTE:** When you use the **SNMPv3 read-write access and v1/v2c read-only access** mode, some Dell applications that access to the print server do not work correctly since they authorize the read-only access of version 1 and version 2c. If you want to use all applications, use the **SNMP v1/v2c read-write access** mode.

- **SNMPv3 read-write access**

With this mode, the print sever uses version 3 of the SNMP protocol. If you want to manage the print server securely, use this mode.

**NOTE:** When you use the **SNMPv3 read-write access** mode, note the following:

- You can manage the print server using Web Based Management only.
- All applications that use SNMPv1/v2c will be restricted. To allow the use of SNMPv1/v2c applications, use **SNMPv3 read-write access and v1/v2c read-only access** or **SNMP v1/v2c read-write access** mode.

## Send an Email Securely

- Configure Email Sending Using Web Based Management
- Send an Email with User Authentication

## Configure Email Sending Using Web Based Management

---

We recommend using Web Based Management to configure secured email sending with user authentication.

---

1. Start your web browser.
2. Type "http://machine's IP address" in your browser's address bar (where "machine's IP address" is the machine's IP address).

For example: http://192.168.1.2

**NOTE:** If you are using a Domain Name System or enable a NetBIOS name, you can type another name, such as "SharedPrinter" instead of the IP address.

- For example:

http://SharedPrinter


If you enable a NetBIOS name, you can also use the node name.

- For example:

http://DELL000499

The NetBIOS name can be found in the Network Configuration Report.

**NOTE:** For Macintosh, access Web Based Management by clicking the machine's icon on the **Status Monitor** screen.

3. No password is required by default. Type a password if you have set one, and then click .
4. Click the **Network** tab.
5. Click **Protocol** in the left navigation bar.
6. In the **SMTP** field, click **Advanced Setting** and make sure the status of **SMTP** is **Enabled**.
7. Configure the **SMTP** settings.
  - For more information, see the Help text in Web Based Management.
  - Confirm that the email settings are correct after configuration by sending a test email.
  - If you do not know the SMTP server settings, contact your network administrator or Internet Service Provider (ISP).
8. When finished, click **Submit**.

The **Test E-mail Send Configuration** dialog box appears.
9. Follow the instructions in the dialog box to test the current settings.

### Send an Email with User Authentication

Your Dell machine supports the SMTP-AUTH method to send email via an email server that requires user authentication. This method prevents unauthorized users from accessing the email server.

You can use SMTP-AUTH method for email notification and email reports (available for certain models).

**NOTE:** We recommend using Web Based Management to configure the SMTP authentication.

#### Email Server Settings



You must configure your machine's SMTP authentication method to match the method used by email server. For details about your email server settings, contact your network administrator or Internet Service Provider (ISP).

**NOTE:** To enable SMTP server authentication, in the Web Based Management **SMTP** screen, under **Server Authentication Method** , you must select **SMTP-AUTH**.



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# Troubleshooting

Use this section to resolve typical problems you may encounter when using your Dell machine. You can correct most problems yourself.

## **IMPORTANT**

For technical help, you must call the country where you bought the machine. Calls must be made from within that country.




Using non-Dell supplies may affect the print quality, hardware performance, and machine reliability.

First, check the following:

- The machine's power cord is connected correctly and the machine's power is on. See the *Setup Guide*.
- All of the protective materials have been removed. See the *Setup Guide*.
- Paper is loaded correctly in the paper tray.
- The interface cables are securely connected to the machine and the computer, or the wireless connection is set up on both the machine and your computer.
- Error and maintenance messages

If you did not solve the problem with the checks, identify the problem and then see *Related Information*.

# Printing Problems

Difficulties	Suggestions
No printout	<p>Check that the correct printer driver has been installed and selected.</p> <p>Check to see if the Status Monitor (for Macintosh only) or the machine's control panel displays an error status.</p> <p>Check that the machine is online:</p> <ul style="list-style-type: none"> <li>• Windows®7 and Windows Server®2008 R2 Click  / <b>Start &gt; Devices and Printers</b>. Right-click <b>Dell Printer E310dw</b> and click <b>See what's printing</b>. Click <b>Printer</b> in the menu bar. Make sure <b>Use Printer Offline</b> is cleared.</li> <li>• Windows Vista®and Windows Server®2008 Click  / <b>Start &gt; Control Panel &gt; Hardware and Sound &gt; Printers</b>. Right-click <b>Dell Printer E310dw</b>. Make sure <b>Use Printer Online</b> is not listed. If it is listed, click this option to set the driver Online.</li> <li>• Windows Server®2003 Click the <b>Start &gt; Printers and Faxes</b>. Right-click <b>Dell Printer E310dw</b>. Make sure <b>Use Printer Online</b> is not listed. If it is listed, click this option to set the driver Online.</li> <li>• Windows®8 and Windows Server®2012 Move your mouse to the lower right corner of your desktop. When the menu bar appears, click <b>Settings &gt; Control Panel &gt; Hardware and Sound &gt; View devices and printers</b>. Right-click the <b>Dell Printer E310dw</b>. Click <b>See what's printing</b>. If printer driver options appear, select your printer driver. Click <b>Printer</b> in the menu bar and make sure that <b>Use Printer Offline</b> is not selected.</li> <li>• Windows Server®2012 R2 Click <b>Control Panel</b> on the <b>Start</b> screen. In the <b>Hardware</b> group, click <b>View devices and printers</b>. Right-click the <b>Dell Printer E310dw</b>. Click <b>See what's printing</b>. If printer driver options appear, select your printer driver. Click <b>Printer</b> in the menu bar and make sure <b>Use Printer Offline</b> is not selected.</li> </ul> <p>Check the machine is not in Power Off mode.</p> <p>If the machine is in Power Off mode, press and hold  on the control panel, and then re-send print data.</p>
The machine is not printing or has stopped printing.	<p>Press and hold <b>X (Cancel)</b> for about two seconds. The machine will cancel the print job and clear it from the memory. The printout may be incomplete. Resend print data.</p>
The headers or footers appear when the document displays on the screen but they do not show up when it is printed.	<p>There is an unprintable area on the top and bottom of the page. Adjust the top and bottom margins in your document to allow for this.</p>
The machine prints unexpectedly or it prints garbage.	<p>Press and hold <b>X (Cancel)</b> for about two seconds to cancel the current print job.</p> <p>Check the settings in your application to make sure they are set up to work with your machine.</p>

The machine prints the first couple of pages correctly, then some pages have missing text.	<p>Check the settings in your application to make sure they are set up to work with your machine.</p> <p>Your computer is not recognizing the full signal of the machine's input buffer. Make sure you connected the interface cable correctly.</p>
The machine does not print on both sides of the paper even though the printer driver setting is 2-sided.	Check the paper size setting in the printer driver. You must select Letter, Legal or Folio (For US region. For EU region, select A4) paper that is 16 to 28 lb (60 to 105 g/m <sup>2</sup> ).
Print speed is too slow.	Try changing the printer driver setting. The highest resolution needs longer data processing, sending and printing time.
The machine does not feed paper.	<p>If there is paper in the paper tray, make sure it is straight. If the paper is curled, straighten it. Sometimes it is helpful to remove the paper, turn the stack over and put it back in the paper tray.</p> <p>Reduce the amount of paper in the paper tray, and then try again.</p> <p>Make sure <b>Manual</b> is not selected for <b>Paper Source</b> in the printer driver.</p> <p>Clean the paper pick-up rollers.</p>
The machine does not feed paper from the Manual feed slot.	<p>Use both hands to push one sheet of paper firmly into the manual feed slot until the top edge of the paper presses against the paper feed rollers. Continue pressing the paper against the rollers until the machine grabs the paper and pulls it in further.</p> <p>Put only one sheet of paper in the manual feed slot.</p> <p>Make sure <b>Manual</b> is selected for <b>Paper Source</b> in the printer driver.</p>
The machine does not feed envelopes.	Load one envelope at a time in the manual feed slot. Your application must be set to print the envelope size you are using. This is usually done in the Page Setup or Document Setup menu of your application.

## Network Problems

- Error Messages

Your Dell machine will display an error message if an error occurs. The most common error messages are shown in the chart.

- Where Can I Find My Dell Machine's Network Settings?
- I Cannot Complete the Wireless Network Setup Configuration.
- My Dell Machine is Not Found on the Network During Printer Driver Installation.
- My Dell Machine Cannot Print over the Network.
- My Dell Machine is not Found on the Network Even After Successful Installation.
- My Security Settings are not Working Properly.
- I Want to Check that My Network Devices are Working Correctly.

## Error Messages

Your Dell machine will display an error message if an error occurs. The most common error messages are shown in the chart.

Error Messages	Cause	Action
Cannot Connect A device is already connected.	Two mobile devices are already connected to the Wi-Fi Direct network when the Dell machine is the Group Owner (G/O).	After the current connection between your Dell machine and another mobile device has shut down, try to configure the Wi-Fi Direct settings again. You can confirm the connection status by printing the Network Configuration Report.
Connection Error	Other devices are trying to connect to the Wi-Fi Direct network at the same time.	Make sure there are no other devices trying to connect to the Wi-Fi Direct network, and then try to configure the Wi-Fi Direct settings again.
Connection Fail	The Dell machine and your mobile device cannot communicate during the Wi-Fi Direct network configuration.	<ul style="list-style-type: none"><li>• Move the mobile device closer to your Dell machine.</li><li>• Move your Dell machine and the mobile device to an obstruction-free area.</li><li>• If you are using the PIN Method of WPS, make sure you have entered the correct PIN.</li></ul>
No Device	When configuring the Wi-Fi Direct network, the Dell machine cannot find your mobile device.	<ul style="list-style-type: none"><li>• Make sure your machine and mobile device are in the Wi-Fi Direct mode.</li><li>• Move the mobile device closer to your Dell machine.</li><li>• Move your Dell machine and the mobile device to an obstruction-free area.</li><li>• If you are manually configuring the Wi-Fi Direct network, make sure you have entered the correct password.</li><li>• If your mobile device has a configuration page for how to obtain an IP address, make sure the IP address of your mobile device has been configured via DHCP.</li></ul>

## Where Can I Find My Dell Machine's Network Settings?

Use one of the following methods to find your Dell machine's network settings, for example, IP address, default gateway, and other settings:

- Print the Network Configuration Report
- Use your Dell machine's control panel

## I Cannot Complete the Wireless Network Setup Configuration.

Turn your wireless router off and back on. Then try to configure the wireless settings again. If you are unable to resolve the problem, follow the instructions below:



Investigate the problem using the WLAN Report.

Cause	Action	Interface
Your security settings (SSID/ Network Key) are not correct.	<ul style="list-style-type: none"> <li>• Select and confirm that you are using the correct security settings.</li> <li>• See the instructions supplied with your wireless LAN access point/router for information on how to find the security settings.</li> <li>• The manufacturer's name or model number of the wireless LAN access point/router may be used as the default security settings.</li> <li>• Consult with the access point/router manufacturer, your Internet provider, or network administrator.</li> <li>• For definitions of SSID and Network Key, see the entries SSID, Network Key and Channels in the Glossary.</li> </ul>	Wireless
Your Dell machine's MAC address is not allowed.	Confirm that the Dell machine's MAC Address is allowed in the filter. You can find the MAC Address in your Dell machine's control panel.	Wireless
Your wireless LAN access point/router is in stealth mode (not broadcasting the SSID).	<ul style="list-style-type: none"> <li>• Enter the correct SSID name or Network Key manually.</li> <li>• Check the SSID name or the Network Key in the instructions supplied with your wireless LAN access point/router and reconfigure the wireless network setup.</li> </ul>	Wireless
Your security settings (SSID/ password) are not correct.	<ul style="list-style-type: none"> <li>• Confirm the SSID and password.</li> <li>• When you are configuring the network manually, the SSID and password are displayed on your Dell machine. If your mobile device supports the manual configuration, the SSID and password will be displayed on your mobile device's screen.</li> <li>• For the definition of SSID, see the Glossary.</li> </ul>	Wi-Fi Direct
You are using Android™ 4.0.	If your mobile device disconnects (approximately six minutes after using Wi-Fi Direct), try the one-push configuration using WPS (recommended) and set the Dell machine as a G/O.	Wi-Fi Direct
Your Dell machine is placed too far from your mobile device.	Move your Dell machine within about 3.3 feet (1 meter) of the mobile device when you configure the Wi-Fi Direct network settings.	Wi-Fi Direct
There are some obstructions (walls or furniture, for example) between your machine and the mobile device.	Move your Dell machine to an obstruction-free area.	Wi-Fi Direct
There is a wireless computer, Bluetooth-supported device, microwave oven, or digital cordless phone near the Dell machine or the mobile device.	Move other devices away from the Dell machine or the mobile device.	Wi-Fi Direct


If you have checked and tried all of the above, but still cannot complete the Wi-Fi Direct configuration, do the following:	<ul style="list-style-type: none"> <li>• Turn your Dell machine off and back on. Then try to configure the Wi-Fi Direct settings again.</li> <li>• If you are using your Dell machine as a client, confirm how many devices are allowed in the current Wi-Fi Direct network, and then check how many devices are connected.</li> </ul>	Wi-Fi Direct
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## My Dell Machine is Not Found on the Network During Printer Driver Installation.

Cause	Action	Interface
Your computer is not connected to the network correctly.	Make sure your computer is connected to a network, that is, to a LAN environment or Internet services. For support on your network problems, contact your network administrator.	Wired/Wireless
	Reconnect the LAN cable to the hub to verify that the cabling and network connections are good. If possible, try connecting the machine to a different port on your hub using a different cable.	Wired
Your machine is not connected to the network correctly, or your machine does not have a valid IP address.	Print the Network Configuration Report and check that <b>Ethernet Link Status</b> or <b>Wireless Link Status</b> is marked <b>Link OK</b> . If <b>Link OK</b> does not appear, do the following: <ul style="list-style-type: none"> <li>• Make sure the wired or wireless setting is listed as active. Check this setting at the top of the report.</li> <li>• Ask your network administrator if your IP address is valid.</li> <li>• Confirm that your WLAN access point/router is available.</li> </ul>	Wired/Wireless
Your security software blocks your machine's access to the network.	<ul style="list-style-type: none"> <li>• In the Installer dialog box, select the option to search for the Dell machine again.</li> <li>• Allow access when the alert message of the security software appears during the printer driver installation.</li> <li>• (Macintosh) If you are using a firewall function of anti-spyware or antivirus security software, temporarily disable it and then install the Dell software.</li> </ul>	Wired/Wireless
Your Dell machine is placed too far from the wireless LAN access point/router.	Place your Dell machine within 1 meter/3.3 feet from the wireless LAN access point/router when you configure the wireless network settings.	Wireless
There are obstructions (walls or furniture, for example) between your machine and the wireless LAN access point/router.	Move your Dell machine to an obstruction-free area, or closer to the wireless LAN access point/router.	Wireless
There is a wireless computer, Bluetooth device, microwave oven, or digital cordless phone near the Dell machine or the wireless LAN access point/router.	Move all the devices away from your Dell machine or wireless LAN access point/router.	Wireless

## My Dell Machine Cannot Print over the Network.

<b>Cause</b>	<b>Action</b>	<b>Interface</b>
Your security software blocks your machine's access to the network.	Some security software might block access without showing a security alert dialog box even after successful installation. To allow access, see the instructions for your security software or ask the software manufacturer.	Wired/Wireless
Your Dell machine was not assigned an available IP address.	Confirm the IP address and the Subnet Mask. Verify that both the IP addresses and Subnet Masks of your computer and the Dell machine are correct and located on the same network. For more information about how to verify the IP address and the Subnet Mask, ask your network administrator.	Wired/Wireless

<p>The failed print job is still in your computer's print queue.</p>	<ul style="list-style-type: none"> <li>• If the failed print job is still in your computer's print queue, delete it.</li> <li>• Otherwise, double-click the printer icon in the following folder and cancel all documents: <ul style="list-style-type: none"> <li>• (Windows Server®2003) Click <b>Start &gt; Printers and Faxes.</b></li> <li>• (Windows Vista®) Click  (<b>Start</b>) &gt; <b>Control Panel &gt; Hardware and Sound &gt; Printers.</b></li> <li>• (Windows®7) Click  (<b>Start</b>) &gt; <b>Devices and Printers &gt; Printers and Faxes.</b> Right-click your Dell machine and select <b>See what's printing.</b></li> <li>• (Windows®8) Move your mouse to the lower right corner of your desktop. When the menu bar appears, click <b>Settings &gt; Control Panel.</b> In the <b>Hardware and Sound</b> group, click <b>View devices and printers &gt; Printers.</b></li> <li>• (Windows Server®2008) Click <b>Start &gt; Control Panel &gt; Printers.</b></li> <li>• (Windows Server®2012) Move your mouse to the lower right corner of your desktop. When the menu bar appears, click <b>Settings &gt; Control Panel.</b> In the <b>Hardware</b> group, click <b>View devices and printers &gt; Printers.</b></li> <li>• (For Windows Server®2012 R2) Click <b>Control Panel</b> on the <b>Start</b> screen. In the <b>Hardware</b> group, click <b>View devices and printers.</b> Right-click your Dell machine and select <b>See what's printing.</b></li> <li>• OS X v10.8.x Click the <b>System Preferences &gt; Print &amp; Scan.</b></li> <li>• OS X v10.9.x, 10.10.x Click the <b>System Preferences &gt; Printer &amp; Scanner.</b></li> </ul> </li> </ul>	<p>Wired/Wireless</p>
<p>Your Dell machine is not connected to the wireless network.</p>	<p>Print the WLAN Report to check the error code on the printed report.</p>	<p>Wireless</p>

If you have checked and tried all of the above, but your Dell machine still cannot print, uninstall the printer driver and reinstall it.

## My Dell Machine is not Found on the Network Even After Successful Installation.

Cause	Action	Interface
Your security software blocks your machine's access to the network.	Some security software might block access without showing a security alert dialog box even after successful installation. To allow access, see the instructions for your security software or ask the manufacturer.	Wired/Wireless
Your Dell machine is not assigned with an available IP address.	Confirm the IP address and the Subnet Mask. Verify that both the IP addresses and Subnet Masks of your computer and the Dell machine are correct and located on the same network. For more information on how to verify the IP address and the Subnet Mask, ask your network administrator.	Wired/Wireless
Your Dell machine is not connected to the network using wireless capabilities.	Print the WLAN Report to check the error code on the printed report.	Wireless

If you have checked and tried all of the above, but your Dell machine is not found on the Network, uninstall the printer driver and reinstall it.

## My Security Settings are not Working Properly.

Cause	Action	Interface
During installation of the printer driver, or when using the printing features, you did not accept the security alert dialog box.	If you did not accept the security alert dialog box, the firewall function of your security software may be rejecting access. Some security software might block access without showing a security alert dialog box. To allow access, see the instructions for your security software or ask the manufacturer.	Wired/Wireless
The required port number for the security software setting may be closed.	The following port numbers are used for Dell network features: <ul style="list-style-type: none"> <li>• Network printing <sup>*1</sup>: Port number 161 and 137/ Protocol UDP</li> </ul> For more information on how to open the port, see the instructions for the security software or ask the manufacturer.	Wired/Wireless

\*1 Windows®




## I Want to Check that My Network Devices are Working Correctly.

Check	Action	Interface
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Check that your Dell machine, access point/router, or network hub is turned on.	<p><b>Check the following:</b></p> <ul style="list-style-type: none"> <li>• The power cord is connected correctly and the Dell machine is turned on.</li> <li>• The access point/router or hub is turned on and its link button is blinking.</li> <li>• All protective packaging has been removed from the machine.</li> <li>• The toner cartridge and drum unit are installed correctly.</li> <li>• The front and back covers are fully closed.</li> <li>• Paper is inserted correctly in the paper tray.</li> <li>• (For wired networks) A network cable is securely connected to the Dell machine and to the router or hub.</li> </ul>	Wired/Wireless
Check the <b>Link Status</b> in the Network Configuration Report.	Print the Network Configuration Report and check that <b>Ethernet Link Status</b> or <b>Wireless Link Status</b> is <b>Link OK</b> .	Wired/Wireless
Check that you can "ping" the Dell machine from your computer.	<p>Ping the Dell machine from your computer using the IP address or the node name at the Windows®command prompt or Macintosh Terminal application:</p> <p>ping &lt;ipaddress&gt; or &lt;nodename&gt;.</p> <ul style="list-style-type: none"> <li>• Successful: Your Dell machine is working correctly and connected to the same network as your computer.</li> <li>• Unsuccessful: Your Dell machine is not connected to the same network as your computer.</li> </ul> <p>Confirm that the IP address and the Subnet Mask are set correctly.</p>	Wired/Wireless
Check that your Dell machine is connected to the wireless network.	Print the WLAN Report to check the error code on the printed report.	Wireless

If you have checked and tried all of the above but you are still having problems, see the instructions supplied with your wireless LAN access point/router to find the SSID and the Network Key information and set them correctly.

## Other Problems

Difficulties	Suggestions
The machine will not turn on.	<p>Adverse conditions on the power connection (such as lightning or a power surge) may have triggered the machine's internal safety mechanisms. Unplug the power cord. Wait for ten minutes, then plug in the power cord and press  to turn on the machine.</p> <p>If the problem is not solved, press and hold  to turn off the machine. If you are using a backup battery or surge suppressor device, disconnect it to make sure it is not the problem. Plug the machine's power cord directly into a different known working wall outlet and press  to turn on the machine.</p>


The Dell software cannot be installed.	<p><b>(Windows®)</b> If the Security Software warning appears on the computer screen during the installation, change the Security Software settings to permit the Dell product setup program or other program to run.</p> <p><b>(Macintosh)</b> If you are using a firewall function of anti-spyware or antivirus security software, temporarily disable it and then install the Dell software.</p>
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## Error and Maintenance Messages

As with any sophisticated office product, errors may occur and supply items may have to be replaced. If this happens, your machine identifies the error or required routine maintenance and shows the appropriate message. The most common error and maintenance messages are shown in the table.

Follow the instructions in the Actions to improve the status.

Error Message	Cause	Action
2-sided Disabled	The back cover of the machine is not closed completely.	Close the back cover of the machine until it locks to the closed position.
	The 2-sided tray is not installed completely.	Install the 2-sided tray firmly in the machine.
Cartridge Error	The toner cartridge is not installed correctly.	Remove the toner cartridge and drum unit assembly. Take out the toner cartridge, and put it back in the drum unit again. Reinstall the toner cartridge and drum unit assembly in the machine. If the problem continues, contact Dell Customer Service or your local Dell dealer.
Cover is Open	The front cover is not completely closed.	Open and then firmly close the front cover of the machine.
	The fusing unit cover is not completely closed or paper was jammed in the back of the machine when you turned on the power.	<ul style="list-style-type: none"> <li>• Close the fusing unit cover located inside the back cover of the machine.</li> <li>• Make sure paper is not jammed inside the back cover of the machine, and then close the fusing unit cover and press <b>OK</b>.</li> </ul>
Drum !	The corona wire on the drum unit must be cleaned.	Clean the corona wire in the drum unit.
	The drum unit or the toner cartridge and drum unit assembly is not installed correctly.	Remove the drum unit, remove the toner cartridge from the drum unit, and put the toner cartridge back into the drum unit. Reinstall the drum unit in the machine.
Drum End Soon	The drum unit is near the end of its life.	Order a new drum unit set before you get the <b>Replace Drum X</b> message.
Jam 2-sided	The paper is jammed underneath the paper tray or the fusing unit.	Clear the Jam in the paper tray or the fusing unit.
Jam Inside	The paper is jammed inside the machine.	Open the front cover, remove the drum and toner, and clear the paper jam.
Jam Rear	The paper is jammed in the back of the machine.	Open the back cover and remove the jammed paper. Close the back cover.

Jam Tray 1	The paper is jammed in the paper tray.	Pull the paper tray out completely, open the front cover and fusing unit cover to remove the jammed paper.
Manual Feed	<b>Manual</b> was selected as the paper source in the printer driver when there was no paper in the manual feed slot.	Place paper in the manual feed slot.
No Paper	The machine is out of paper, or paper is not correctly loaded in the paper tray.	<ul style="list-style-type: none"> <li>• Refill paper in the paper tray. Make sure the paper guides are set to the correct size.</li> <li>• Remove the paper and load it again. Make sure the paper guides are set to the correct size.</li> <li>• Make sure not to overfill the paper tray.</li> </ul>
No Toner	The toner cartridge or the toner cartridge and drum unit assembly is not installed correctly.	Remove the toner cartridge and drum unit assembly. Remove the toner cartridge from the drum unit, and reinstall the toner cartridge back in the drum unit. Reinstall the toner cartridge and drum unit assembly back in the machine. If the problem continues, replace the toner cartridge with a new one.
Out of Memory	The machine's memory is full.	Press <b>OK</b> and reduce the print resolution.
Print Unable ##	The machine has a mechanical problem.	<ul style="list-style-type: none"> <li>• Press and hold  to turn off the machine, wait a few minutes, and then turn it on again.</li> <li>• If the problem continues, contact Dell Customer Service or your local Dell dealer.</li> </ul>
Replace Drum	It is time to replace the drum unit.	Replace the drum unit with a new one.
	The drum unit counter was not reset when the previous drum was removed.	Reset the drum unit counter.
Replace Toner	The toner cartridge is at the end of its life. The machine stops all print operations.	Replace the toner cartridge with a new one. Set the Continue mode.
Self-Diagnostic	The temperature of the fusing unit does not rise to a specified temperature within the specified time.	Press and hold  to turn off the machine, wait a few seconds, and then turn it on again.
	The fusing unit is too hot.	Leave the machine idle for 15 minutes with the power on.
Size Error DX	The paper size specified in the printer driver and the machine's menu are not available for automatic 2-sided printing.	Press and hold <b>X (Cancel)</b> for about two seconds to cancel a print job. Open the front cover and close it. Choose a paper size supported by 2-sided printing. Paper sizes available for automatic 2-sided printing are Letter, Legal and Folio.
	The paper in the tray is not the correct size and is not available for automatic 2-sided printing.	Load the correct size of paper in the tray and set the tray for that paper size. Paper sizes available for automatic 2-sided printing are Letter, Legal and Folio.
Size Mismatch	The paper in the tray is not the correct size.	Load the correct size of paper in the tray and set the size of paper to the tray.



Toner Ended(Continue mode)	It is time to replace the toner cartridge.	Replace the toner cartridge with a new one.
Toner Low	If the LCD displays this message you can still print. The toner cartridge is near the end of its life.	Order a new toner cartridge now so you have it when the LCD displays Replace Toner.

## Clear the Paper Jam

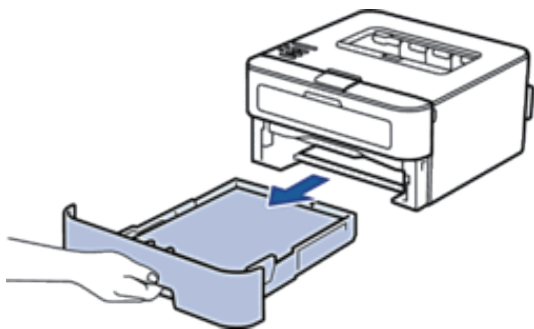
Always remove the remaining paper from the paper tray and straighten the stack when you are adding new paper. This helps prevent multiple sheets of paper from feeding through the machine at one time and prevents paper jams.

- Paper is Jammed in the Paper Tray
- Paper is Jammed at the Back of the Machine
- Paper is Jammed inside the Machine
- Paper is Jammed in the 2-sided Tray

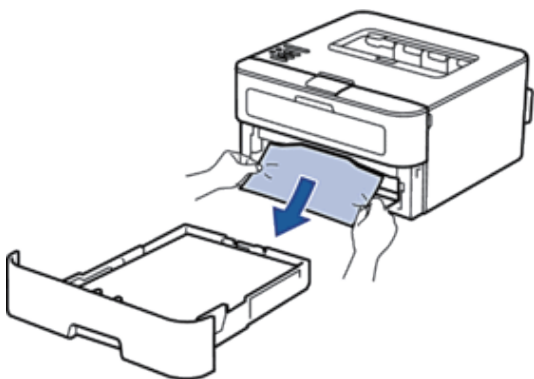
### Paper is Jammed in the Paper Tray

If the machine's control panel or the Status Monitor (for Macintosh only) displays there is a jam in the paper tray, do the following steps.

1. Pull the paper tray completely out of the machine.

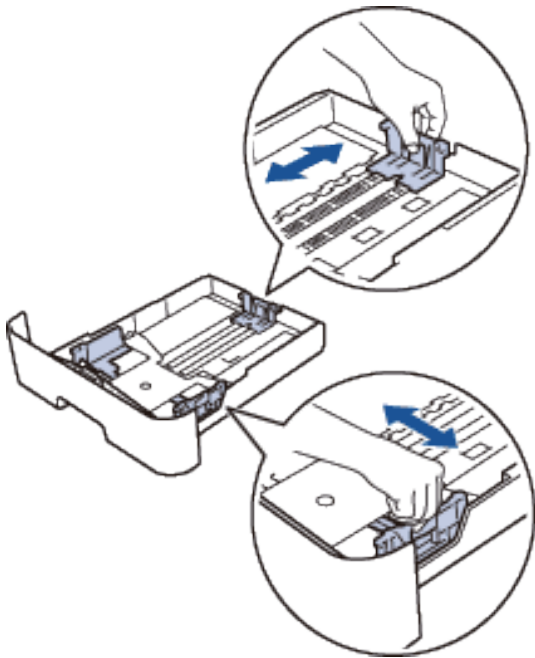


2. Slowly pull out the jammed paper.

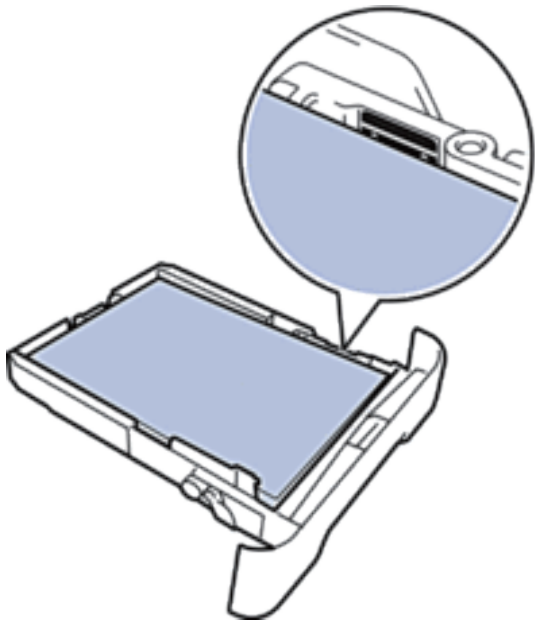


Pulling the jammed paper downward using both hands allows you to remove the paper more easily.

3. Fan the stack of paper to prevent further jams, and slide the paper guides to fit the paper size.



4. Make sure the paper is below the "MAX" mark.



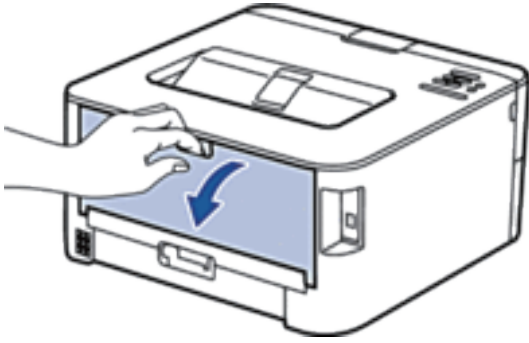
5. Put the paper tray firmly back in the machine.

## Paper is Jammed at the Back of the Machine

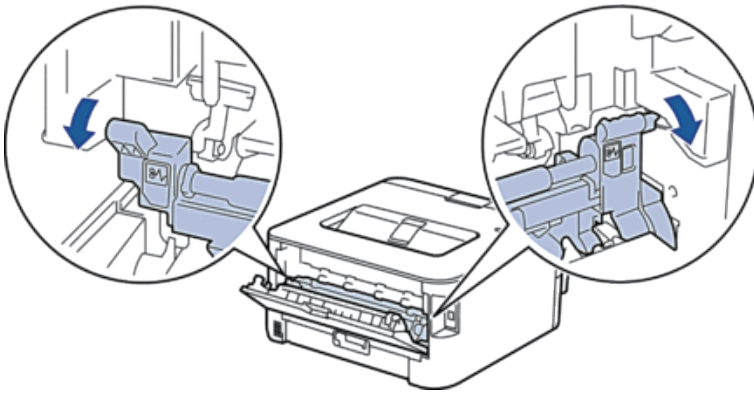
If the machine's control panel or the Status Monitor (for Macintosh only) indicates that there is a jam in the back (Rear) of the machine, do the following:

1. Leave the machine turned on for 10 minutes. This allows the internal fan to cool the extremely hot parts inside the machine.

2. Open the back cover.



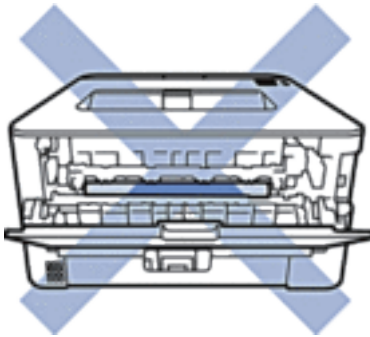
3. Pull the black tabs at the left and right sides toward you to release the fusing unit cover.



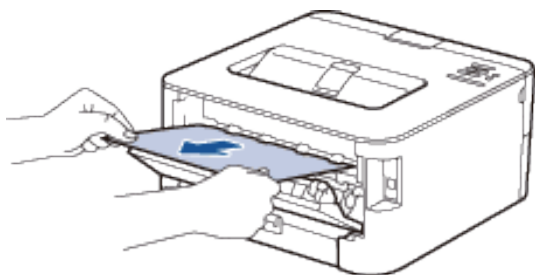
**⚠ WARNING**

**HOT SURFACE**

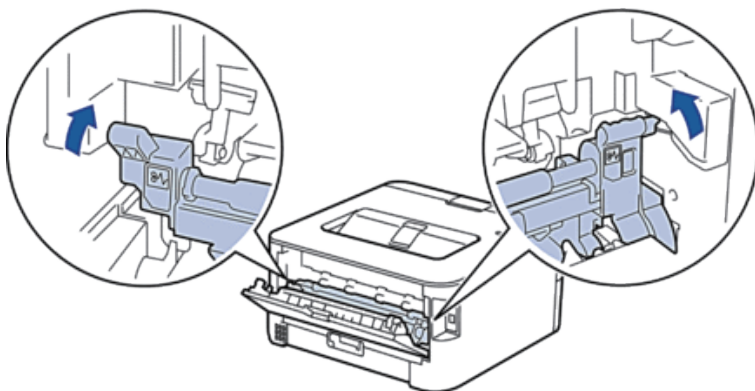
The machine's internal parts will be extremely hot. Wait for the machine to cool down before touching them.



4. Use both hands to gently pull the jammed paper out of the fusing unit.



5. Close the fusing unit cover. Make sure the black tabs at the left and right sides lock into place.



6. Close the back cover until it locks in the closed position.

## Paper is Jammed inside the Machine

If the machine's control panel or the Status Monitor (for Macintosh only) displays there is a jam inside the machine, do the following steps.

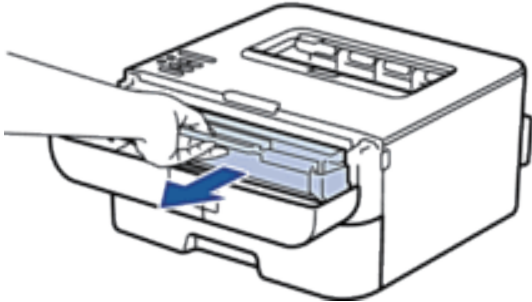
### CAUTION

Do not attempt to remove a paper jammed deeply inside the product, particularly a paper wrapped around a heat roller. Otherwise, it may cause injuries or burns, and even worse, may generate smoke if you keep operating the product with a paper jammed. Switch off the product promptly and contact your local Dell representative for more information.

1. Leave the machine turned on for 10 minutes for the internal fan to cool the extremely hot parts inside the machine.
2. Open the front cover.



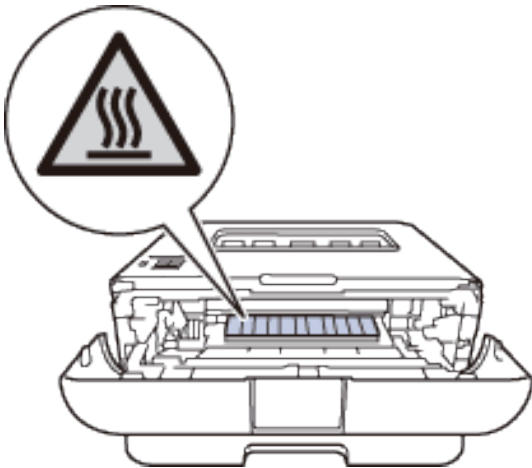
3. Remove the toner cartridge and drum unit assembly.



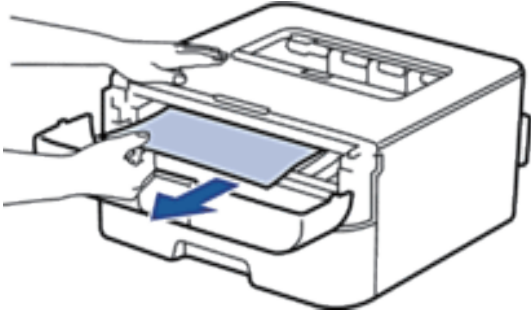
**! WARNING**

**HOT SURFACE**

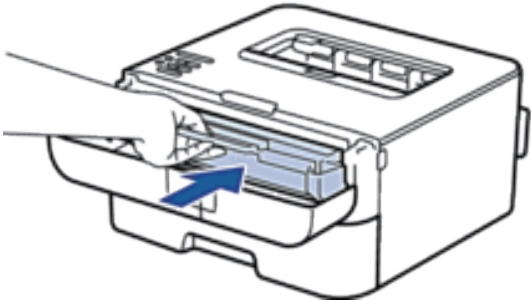
Internal parts of the machine will be extremely hot. Wait for the machine to cool down before you touch the internal parts of the machine.



4. Pull out the jammed paper slowly.



5. Install the toner cartridge and drum unit assembly into the machine.

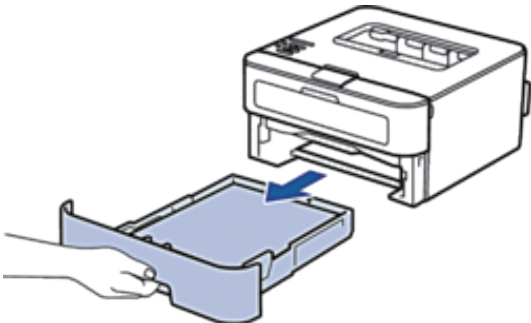


6. Close the front cover of the machine.

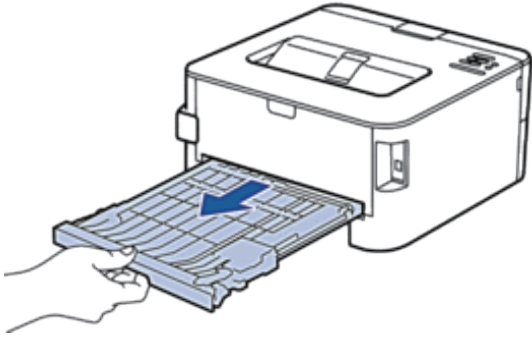
## Paper is Jammed in the 2-sided Tray

If the machine's control panel or the Status Monitor (for Macintosh only) displays there is a jam in the 2-sided paper tray, do the following steps.

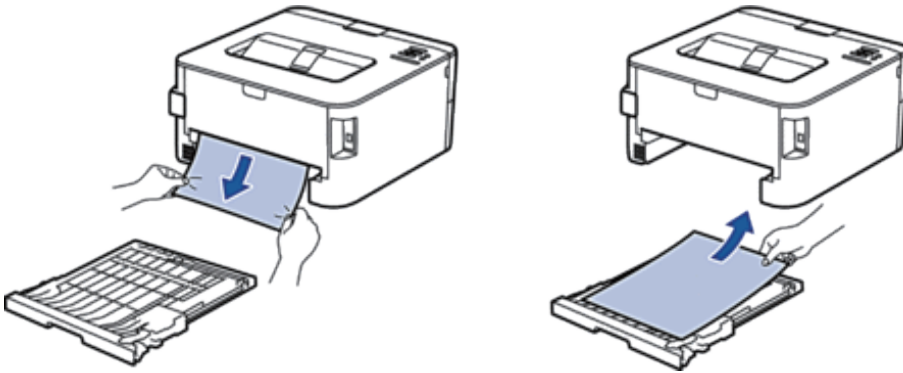
1. Leave the machine turned on for 10 minutes. This allows the internal fan to cool the extremely hot parts inside the machine.
2. Pull the paper tray completely out of the machine.



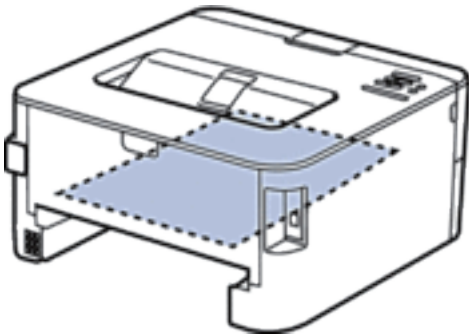
3. At the back of the machine, pull the 2-sided tray completely out of the machine.



4. Pull the jammed paper out of the machine or out of the 2-sided tray.



5. Remove paper that may have jammed under the machine due to static electricity.



6. If paper is not caught inside the 2-sided tray, open the back cover.



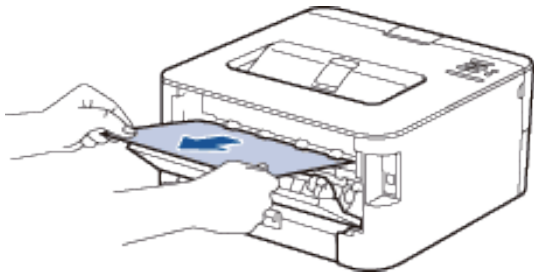
**! WARNING**

**HOT SURFACE**

The machine's internal parts will be extremely hot. Wait for the machine to cool down before touching them.



7. Use both hands to gently pull the jammed paper out of the back of the machine.



8. Close the back cover until it locks in the closed position.
9. Put the 2-sided tray firmly back in the machine.
10. Put the paper tray firmly back in the machine.

## Improve the Print Quality

If you have a print quality problem, print a test page first. If the printout looks good, the problem is probably not the machine. Check the interface cable connections and try printing a different document. If the printout or test page printed from the machine has a quality problem, check the examples of poor print quality in the table and follow the recommendations.

**IMPORTANT**

Using non-Dell supplies may affect the print quality, hardware performance, and machine reliability.

1. To get the best print quality, we suggest using recommended print media. Make sure you use paper that meets our specifications.
2. Check that the toner cartridge and drum unit are installed correctly.

Examples of poor print quality	Recommendation
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Faint

- If the machine indicates Replace Toner status, put in a new toner cartridge.
- Check the machine's environment. Conditions such as humidity, high temperatures, and so on, may cause this print fault.
- If the whole page is too light, Toner Save may be turned on. Turn off Toner Save mode in the machine's menu settings or the printer driver.
- Clean the drum unit.
- Clean the corona wire of the drum unit.
- Replace the toner cartridge with a new toner cartridge.
- Replace the drum unit with a new drum unit.



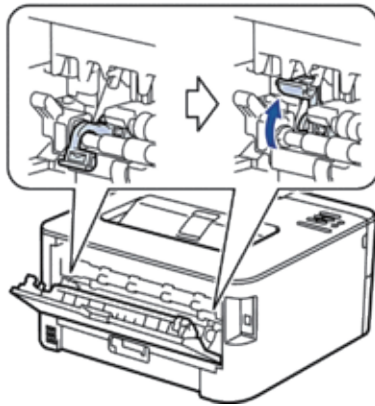
Gray background

- Check the machine's environment. Conditions such as high temperatures and high humidity can increase the amount of background shading.
- Clean the drum unit.
- Replace the toner cartridge with a new toner cartridge.
- Replace the drum unit with a new drum unit.





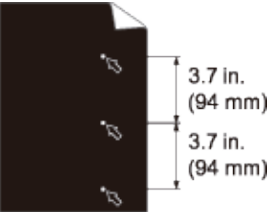
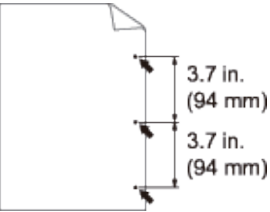
Ghost



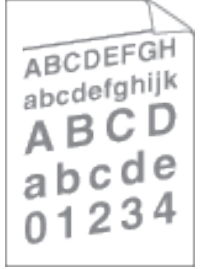
- Check the machine's environment. Conditions such as low humidity and low temperatures may cause this print quality problem.
- Select the appropriate media type in the printer driver.
- Select the appropriate media type in the menu setting.
- Make sure the two levers inside the back cover are in the up position. Pull up the two levers until they stop.




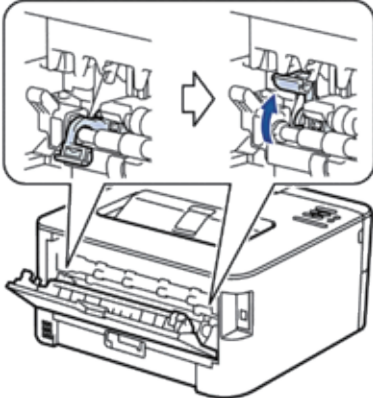



- Clean the drum unit.
- Replace the drum unit with a new drum unit.
- Replace the toner cartridge with a new toner cartridge.
- The fusing unit may be contaminated.  
Contact Dell Customer Service.

 <p>Toner specks</p>	<ul style="list-style-type: none"> <li>• Clean the corona wire on the drum unit.</li> <li>• The drum unit may be damaged. Replace the drum unit with a new drum unit.</li> <li>• The fusing unit may be contaminated. Contact Dell Customer Service.</li> </ul>
 <p>Hollow print</p>	<ul style="list-style-type: none"> <li>• Select <b>Thick Paper</b> mode in the printer driver or use thinner paper than you are currently using.</li> <li>• Select <b>Thick Paper</b> in the machine's <b>Media Type</b> menu setting.</li> <li>• Check the machine's environment. Conditions such as high humidity can cause hollow print.</li> <li>• The drum unit may be damaged. Replace the drum unit with a new drum unit.</li> </ul>
 <p>All black</p>	<ul style="list-style-type: none"> <li>• Clean the corona wire inside the drum unit by sliding the tab. Make sure you return the tab to the home position (▲).</li> <li>• The drum unit may be damaged. Replace the drum unit with a new drum unit.</li> </ul>
 <p>White lines across the page</p>	<ul style="list-style-type: none"> <li>• Select the appropriate media type in the printer driver.</li> <li>• Select the appropriate media type in the menu setting.</li> <li>• The problem may disappear by itself. Print multiple blank pages to clear this problem, especially if the machine has not been used for a long time.</li> <li>• Clean the drum unit.</li> <li>• The drum unit may be damaged. Replace the drum unit with a new drum unit.</li> </ul>

 <p>Lines across the page</p>	<ul style="list-style-type: none"> <li>• Clean the corona wire inside the drum unit.</li> <li>• Clean the drum unit.</li> <li>• The drum unit may be damaged.</li> </ul> <p>Replace the drum unit with a new drum unit.</p>
 <p>White lines, bands or ribbing across the page</p>	<ul style="list-style-type: none"> <li>• Check the machine's environment. Conditions such as high humidity and high temperatures may cause this print quality problem.</li> <li>• Clean the drum unit.</li> <li>• If the problem is not solved after printing a few pages, replace the drum unit with a new drum unit.</li> </ul>
 <p>White Spots on black text and graphics at 3.7 in. (94 mm) intervals</p>  <p>Black spots at 3.7 in. (94 mm) intervals</p>	<ul style="list-style-type: none"> <li>• Make 10-15 copies of a blank, white sheet of paper. If the problem is not solved after printing the blank pages, the drum unit may have foreign material, such as glue from a label, stuck on the drum. Clean the drum unit.</li> <li>• The drum unit may be damaged.</li> </ul> <p>Replace the drum unit with a new drum unit.</p>

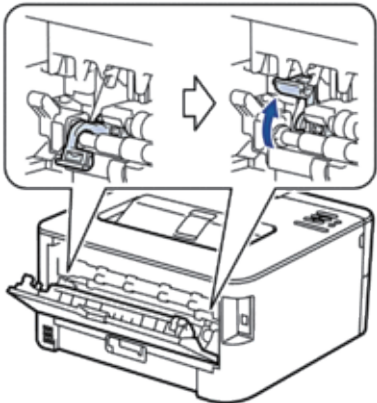
 <p>Black toner marks across the page</p>	<ul style="list-style-type: none"> <li>• If you use label sheets for laser printers, the glue from the sheets may sometimes stick to the drum surface. Clean the drum unit.</li> <li>• If you used paper that has clips or staples, the drum unit may be damaged.</li> <li>• If the unpacked drum unit is in direct sunlight (or room light for long periods of time), the unit may be damaged.</li> <li>• Clean the drum unit.</li> <li>• The toner cartridge may be damaged. Replace the toner cartridge with a new toner cartridge.</li> <li>• The drum unit may be damaged. Replace the drum unit with a new drum unit.</li> </ul>
 <p>Black lines down the page Printed pages have toner stains down the page</p>	<ul style="list-style-type: none"> <li>• Clean the corona wire inside the drum unit by sliding the tab. Make sure you return the tab to the home position (▲).</li> <li>• The toner cartridge may be damaged. Replace the toner cartridge with a new toner cartridge.</li> <li>• The drum unit may be damaged. Replace the drum unit with a new drum unit.</li> <li>• The fusing unit may be contaminated. Contact Dell Customer Service.</li> </ul>
 <p>White lines down the page</p>	<ul style="list-style-type: none"> <li>• Make sure foreign material such as a torn piece of paper, sticky notes or dust is not inside the machine and around the toner cartridge and drum unit.</li> <li>• The toner cartridge may be damaged. Replace the toner cartridge with a new toner cartridge.</li> <li>• The drum unit may be damaged. Replace the drum unit with a new drum unit.</li> </ul>
 <p>Image skewed</p>	<ul style="list-style-type: none"> <li>• Make sure the paper or other print media is loaded correctly in the paper tray and the guides are not too tight or too loose against the paper stack.</li> <li>• Set the paper guides correctly.</li> <li>• The paper tray may be too full.</li> <li>• Check the paper type and quality.</li> <li>• Check for loose objects such as torn paper inside the machine.</li> <li>• (For automatic 2-sided printing models) If the problem only occurs during 2-sided printing, check for torn paper in the 2-sided tray, verify the 2-sided tray is inserted completely and the back cover is closed completely.</li> </ul>

 <p>Curled or wavy</p>	<ul style="list-style-type: none"> <li>• Check the paper type and quality. High temperatures and high humidity will cause paper to curl.</li> <li>• If you do not use the machine often, the paper may have been in the paper tray too long. Turn over the stack of paper in the paper tray. Also, fan the paper stack, and then rotate the paper 180° in the paper tray.</li> <li>• Open the back cover (face-up output tray) to let the printed paper exit onto the face-up output tray.</li> <li>• Choose <b>Reduce Paper Curl</b> mode in the printer driver when you do not use our recommended print media.</li> </ul>
 <p>Wrinkles or creases</p>	<ul style="list-style-type: none"> <li>• Make sure paper is loaded correctly.</li> <li>• Check the paper type and quality.</li> <li>• Turn over the stack of paper in the tray or rotate the paper 180° in the input tray.</li> </ul>
 <p>Poor fixing</p>	<ul style="list-style-type: none"> <li>• Make sure the two levers inside the back cover are in the up position. Pull up the two levers until they stop.</li> </ul>  <ul style="list-style-type: none"> <li>• Make sure the media type setting in the driver matches the type of paper you are using.</li> <li>• Choose <b>Improve Toner Fixing</b> mode in the printer driver.</li> </ul> <p>If this selection does not provide enough improvement, change the printer driver setting in <b>Media Type</b> to a thick setting. If you are printing an envelope, choose <b>Env. Thick</b> in the media type setting.</p>



Envelope creases

- Make sure the two levers inside the back cover are pulled down to the envelope position when you print envelopes. After you have finished printing, reset the levers back to their original positions. Pull up the levers until they stop.



- Make sure envelopes are printed with the back cover (face-up output tray) opened.
- Make sure envelopes are fed only from the manual feed slot.

## Machine Information

- Check the Serial Number
- Check the Firmware Version
- Reset Functions

### Check the Serial Number

1. Press ▲ or ▼ to select the `Machine Info.` option, and then press **OK**.
2. Press ▲ or ▼ to select the `Serial No.` option, and then press **OK**.

The machine displays the serial number on the LCD.

### Check the Firmware Version

1. Press ▲ or ▼ to display the `Machine Info.` option, and then press **OK**.
2. Press ▲ or ▼ to display the `Version` option, and then press **OK**.
3. Press ▲ or ▼ to display the `Main Version` or `Sub1 Version` option, and then press **OK**.

The machine displays the firmware version on the LCD.

### Reset Functions

- Network Reset  
Use the Network Reset function to restore the print server's network settings, such as password and IP address, back to its default factory settings.
- Factory Reset  
Use the Factory Reset function to reset certain machine settings back to the original factory settings.

- Settings Reset

## Network Reset

Use the Network Reset function to restore the print server's network settings, such as password and IP address, back to its default factory settings.

- 
- Unplug all the interface cables before you perform a Network Reset.
- 

1. Press ▲ or ▼ to select the `Reset Menu` option, and then press **OK**.
2. Press ▲ or ▼ to select the `Network` option, and then press **OK**.
3. Press ▲ to select `Yes`.

The machine will restart automatically.

## Factory Reset

Use the Factory Reset function to reset certain machine settings back to the original factory settings.

1. Press ▲ or ▼ to select the `Reset Menu` option, and then press **OK**.
2. Press ▲ or ▼ to select the `Factory Reset` option, and then press **OK**.
3. Press ▲ to select `Reset`.

## Settings Reset

1. Disconnect the network cable from the machine. If you do not, network settings such as IP address will not be reset.
2. Press ▲ or ▼ to select the `Reset Menu` option, and then press **OK**.
3. Press ▲ and **Back** at the same time.
4. When `Settings Reset` appears, press **OK**.
5. When `Restart Printer?` appears, press **OK**.  
The machine restarts automatically.





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Pack and Ship Your Dell Machine .....	170



## Routine Maintenance

- Replace Supplies  
You must replace supplies when the machine indicates that the life of the supply is over.
- Clean the Machine  
Clean the outside and inside of the machine regularly with a dry, lint-free cloth.
- Check the Remaining Life of Parts
- Pack and Ship Your Dell Machine

## Replace Supplies

You must replace supplies when the machine indicates that the life of the supply is over.

You can replace the following supplies yourself.

Using non-Dell supplies may affect the print quality, hardware performance, and machine reliability.

**NOTE:** The toner cartridge and drum unit are two separate supplies. Make sure both are installed as an assembly.

To avoid any inconvenience, you may want to buy spare supplies to keep as replacements before the machine stops printing.



### WARNING

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- Never use a vacuum cleaner for spilled toner and residual toner in this product, toner cartridge or toner bottle. It may catch fire by electric sparks inside a vacuum cleaner and cause explosion. Use a broom or a wet cloth to wipe off the spills. If you spill a large volume of toner, contact your local Dell representative.
  - Never throw a toner cartridge into an open flame. Remaining toner in the cartridge may catch fire and cause burn injuries or explosion. If you have a used toner cartridge no longer needed, contact your local Dell representative for its disposal.
- 



### CAUTION

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- Keep drum cartridges (or drum if not a cartridge type) and toner cartridges out of the reach of children. If a child accidentally swallows toner, spit it out, rinse mouth with water, drink water and consult a physician immediately.
  - When replacing drum cartridges (or drum if not a cartridge type) and toner cartridges, be careful not to spill the toner. In case of any toner spills, avoid contact with clothes, skin, eyes and mouth as well as inhalation.
  - If toner spills onto your skin or clothing, wash it off with soap and water. If you get toner particles in the eyes, wash it out with plenty of water for at least 15 minutes until irritation is gone. Consult a physician if necessary.
- 

### IMPORTANT

- Dell machines are designed to work with toner of a particular specification and will work to a level of optimum performance when used with Dell Original toner cartridges. Dell cannot guarantee this optimum performance if toner or toner cartridges of other specifications are used. The machine may not detect toner or toner cartridges of other specifications correctly but may instead detect such items as standard yield toner cartridges. Dell does not therefore recommend the use of cartridges other than Dell Original cartridges with this machine, or the refilling of empty cartridges with toner from other sources. If damage is caused to the drum unit or other parts

of this machine as a result of the use of toner or toner cartridges other than Dell Original products due to the incompatibility or lack of suitability of those products with this machine, any repairs required as a result may not be covered by the warranty.

- For best performance, use a Dell Original drum and toner cartridge. Printing with a third party drum unit or toner cartridge may reduce not only the print quality but also the quality and life of the machine itself. Warranty coverage may not apply to problems caused by the use of a third party drum or toner cartridge.

**NOTE:** Be sure to seal up the used supplies tightly in a bag so that toner powder does not spill out of the cartridge.

**NOTE:** We recommend placing used supplies on a piece of paper to prevent accidentally spilling or scattering the material inside.

**NOTE:** If you use paper that is not a direct equivalent for the recommended print media, the life of supplies and machine parts may be reduced.

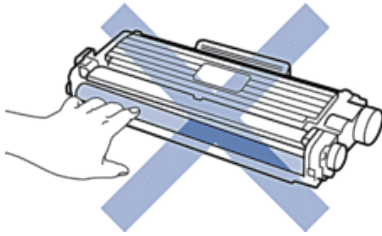
**NOTE:** The projected life for each of the toner cartridges is based on ISO/IEC 19752. Frequency of replacement will vary depending on the print volume, percentage of coverage, types of media used, and powering on/off the machine.

**NOTE:** Frequency of replacement supplies except toner cartridges will vary depending on the print volume, types of media used, and powering on/off the machine.

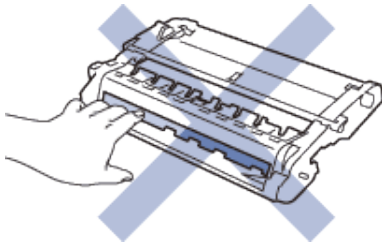
**NOTE:** Handle the toner cartridge carefully. If toner scatters on your hands or clothes, immediately wipe or wash it off with cold water.

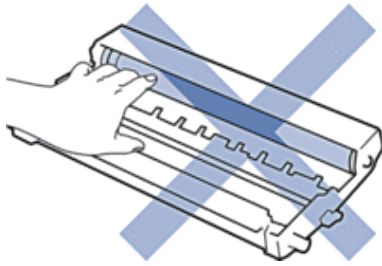
**NOTE:** To avoid print quality problems, DO NOT touch the shaded parts shown in the illustrations.

<Toner cartridge>



<Drum unit>





## Learn About The Toner Cartridge

The Standard toner cartridge can print approximately 1,200 pages <sup>\*1</sup>. The High Yield toner cartridge can print approximately 2,600 pages <sup>\*1</sup>. Actual page count will vary depending on your average type of document.

When a toner cartridge is running low, the control panel shows Toner Low indication.

The toner cartridge that comes with your Dell machine is a Starter toner cartridge. The approximate toner life may differ from the Standard toner cartridge.

Approximate life of Starter toner cartridge

Approximately 700 pages ( Letter or A4 pages) <sup>\*1</sup>

**NOTE:** It is a good idea to keep a new toner cartridge ready for use when you see the Toner Low warning.

**NOTE:** To ensure high quality printing, we recommend using only Genuine Dell Brand toner cartridges. When you want to buy toner cartridges, contact Dell Customer Service.

**NOTE:** DO NOT unpack the new toner cartridge until you are ready to install it.

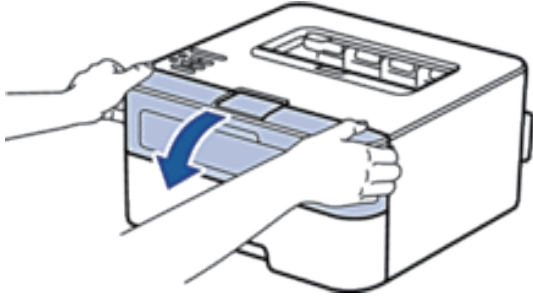
**NOTE:** If a toner cartridge is left unpacked for a long time, the toner life will be shortened.

**NOTE:** Dell strongly recommends you DO NOT refill the toner cartridge provided with your machine. We also strongly recommend you continue to use only Genuine Dell Brand replacement toner cartridges. Use or attempted use of third party toner and/or cartridges in the Dell machine may cause damage to the machine and/or may result in unsatisfactory print quality. Our limited warranty coverage does not apply to any problem that is caused by the use of third party toner and/or cartridges. To protect your investment and obtain premium performance from the Dell machine, we strongly recommend the use of Genuine Dell Supplies.

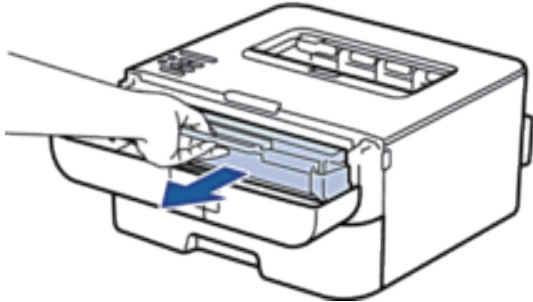
<sup>\*1</sup> Approximate cartridge yield is declared in accordance with ISO/IEC 19752.

## Replace the Toner Cartridge

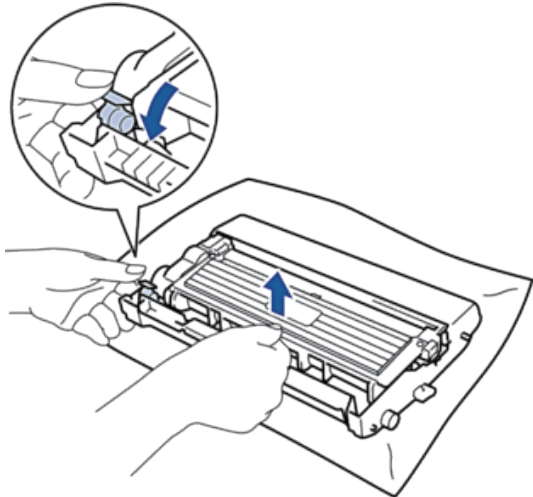
1. Make sure the machine is turned on.
2. Open the front cover.



3. Remove the toner cartridge and drum unit assembly from the machine.

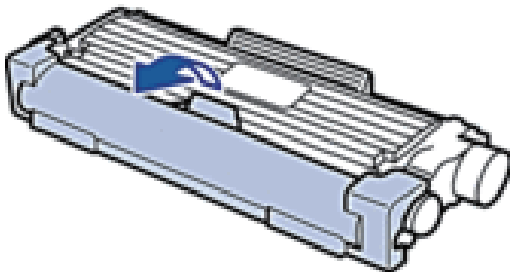


4. Push down the lock lever and take the toner cartridge out of the drum unit.

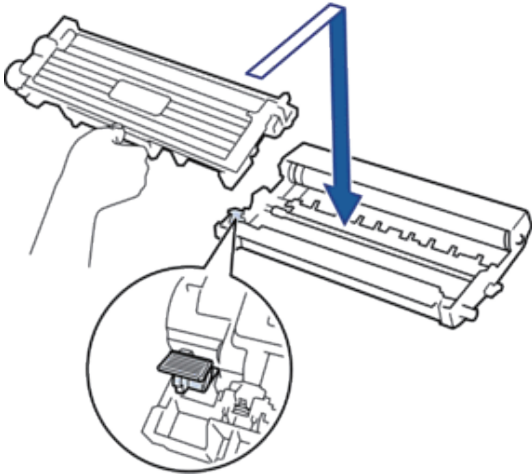


5. Unpack the new toner cartridge.

6. Remove the protective cover.

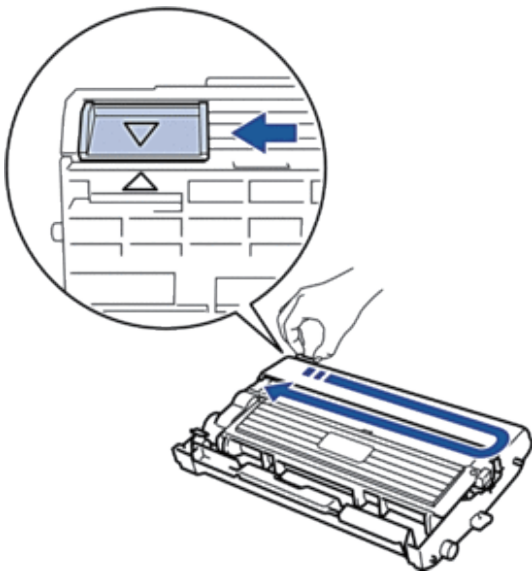


- Put the new toner cartridge firmly into the drum unit until you hear it lock into place.



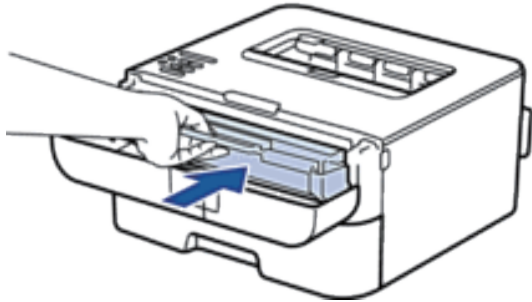
**NOTE:** Make sure you put the toner cartridge in correctly or it may separate from the drum unit.

- Clean the corona wire inside the drum unit by gently sliding the tab from left to right and right to left several times.



**NOTE:** Be sure to return the tab to the Home position (▲). The arrow on the tab must be aligned with the arrow on the drum unit. If it is not, printed pages may have a vertical stripe.

- Install the toner cartridge and drum unit assembly back into the machine.



**10.** Close the front cover of the machine.

**NOTE:** Do not turn off the machine or open the front cover until the machine returns to Ready Mode.

## Learn About The Drum Unit

A new drum unit can print approximately 12,000 Letter or A4 size single-sided pages.

Drum wear and tear occurs due to use and rotation of the drum and interaction with paper, toner and other materials in the paper path. In designing this product, Dell decided to use the number of rotations of the drum as a reasonable determinant of the drum life. When a drum reaches the factory-established rotation limit corresponding to the rated page yield, the product's LCD will advise you to replace the applicable drum. The product will continue to function; however, print quality may not be optimal.

**NOTE:** If an unpacked drum unit is placed in direct sunlight (or room light for long periods of time), the unit may be damaged.

**NOTE:** There are many factors that determine the actual drum life, such as the temperature, humidity, type of paper, type of toner used and so on. Under ideal conditions, the average drum life is estimated at approximately 12,000 pages. The actual number of pages that your drum will print may be significantly less than this estimate.

Because we have no control over the many factors that determine the actual drum life, we cannot guarantee a minimum number of pages that will be printed by your drum.

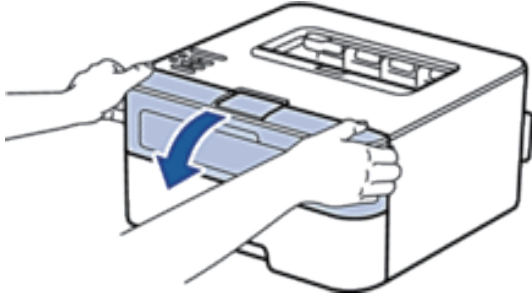
**NOTE:** For best performance, use only genuine Dell toner. The machine should be used only in a clean, dust-free environment with adequate ventilation.

Printing with a non-Dell drum unit may reduce not only the print quality but also the quality and life of the machine itself. Warranty coverage does not apply to problems caused by the use of a non-Dell drum unit.

## Replace the Drum Unit

1. Make sure the machine is turned on.
2. Open the front cover.

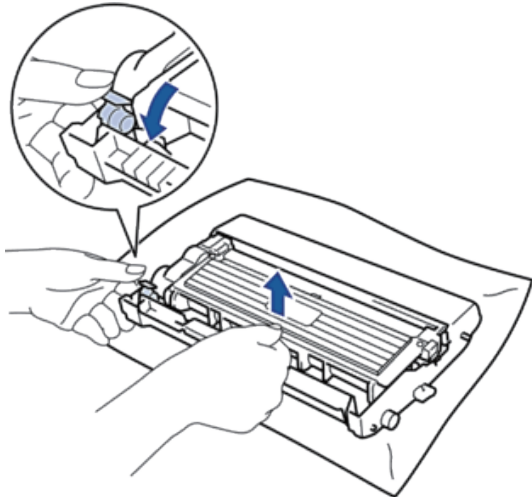




**3.** Remove the toner cartridge and drum unit assembly from the machine.

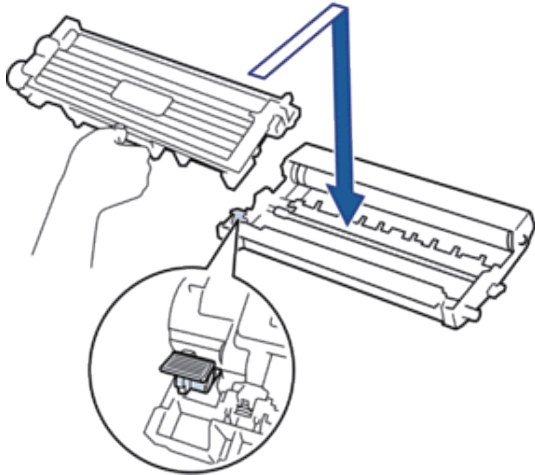


**4.** Push down the lock lever and take the toner cartridge out of the drum unit.



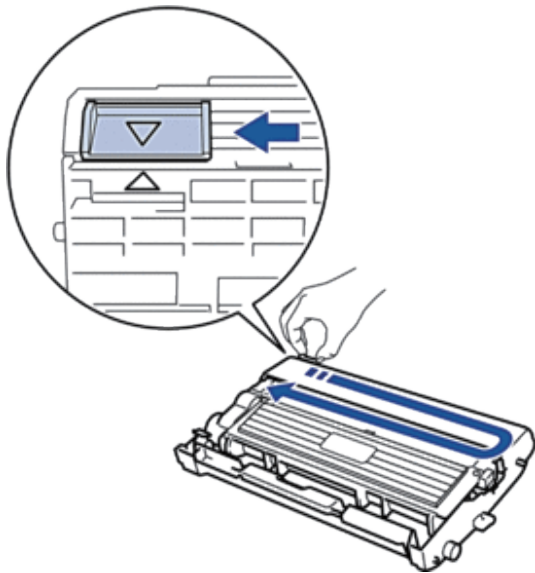
**5.** Unpack the new drum unit.

**6.** Put the toner cartridge firmly into the new drum unit until you hear it lock into place.



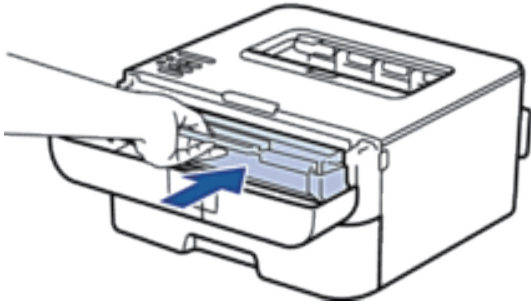
**NOTE:** Make sure you put the toner cartridge in correctly or it may separate from the drum unit.

7. Clean the corona wire inside the drum unit by gently sliding the tab from left to right and right to left several times.



**NOTE:** Be sure to return the tab to the Home position ( ▲ ). The arrow on the tab must be aligned with the arrow on the drum unit. If it is not, printed pages may have a vertical stripe.

8. Install the toner cartridge and drum unit assembly back into the machine.



9. Close the front cover of the machine.

## Clean the Machine

Clean the outside and inside of the machine regularly with a dry, lint-free cloth.

When you replace the toner cartridge or the drum unit, make sure you clean the inside of the machine. If printed pages are stained with toner, clean the inside of the machine with a dry, lint-free cloth.

### **WARNING**

- DO NOT use flammable substances, any type of spray, or an organic solvent/liquid containing alcohol or ammonia to clean the inside or outside of the product. Doing so could cause a fire or electrical shock. Instead, use only a dry, lint-free cloth.
- When cleaning this product, use the designated cleaning materials exclusive to it. Other cleaning materials may result in poor performance of the product. Never use aerosol cleaners to avoid catching fire and explosion.



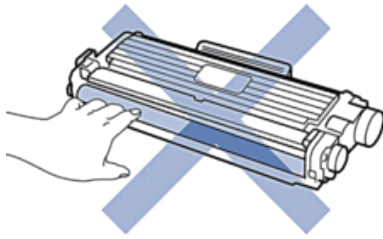
### **CAUTION**

When cleaning this product, always switch off and unplug it. Access to a live machine interior may cause electric shock.

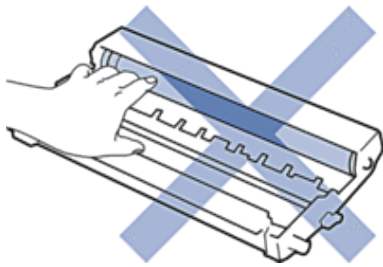
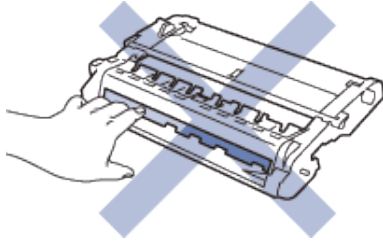
### **IMPORTANT**

- Use neutral detergents. Cleaning with volatile liquids such as thinner or benzine will damage the surface of the machine.
- DO NOT use cleaning materials that contain ammonia.
- DO NOT use isopropyl alcohol to remove dirt from the control panel. It may crack the panel.
- To avoid print quality problems, DO NOT touch the shaded parts shown in the illustrations.

<Toner cartridge>



<Drum unit>



## Clean the Corona Wire

If you have print quality problems or the control panel displays Drum ! status, clean the corona wire.

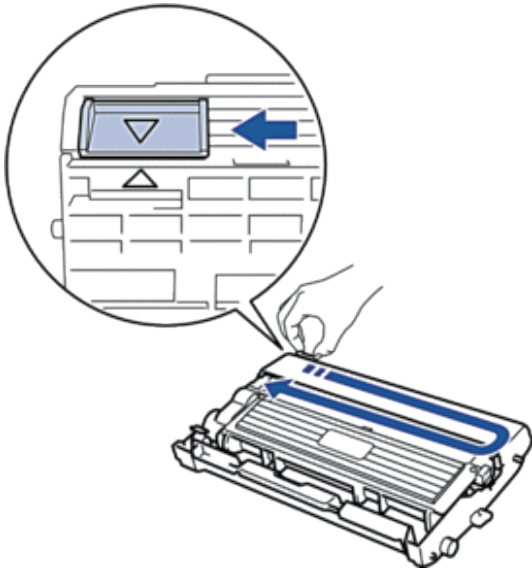
1. Open the front cover.



2. Remove the toner cartridge and drum unit assembly from the machine.

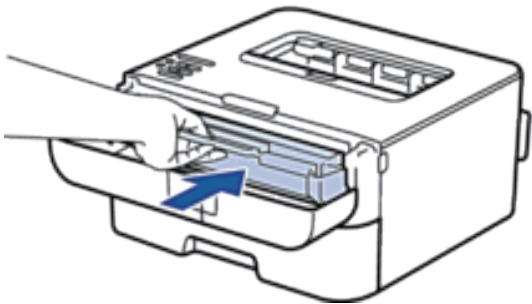


3. Clean the corona wire inside the drum unit by gently sliding the tab from left to right and right to left several times.



**NOTE:** Be sure to return the tab to the Home position ( ▲ ). The arrow on the tab must be aligned with the arrow on the drum unit. If it is not, printed pages may have a vertical stripe.

4. Install the toner cartridge and drum unit assembly back into the machine.



5. Close the front cover of the machine.

## Clean the Drum Unit

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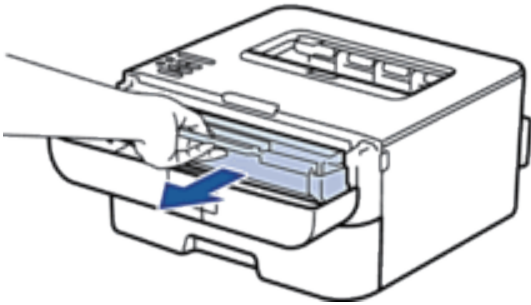
If your printout has dots or other repeating marks at 3.7 in. (94 mm) intervals, the drum may have foreign material, such as glue from a label stuck on the drum surface. Follow these steps to solve the problem:

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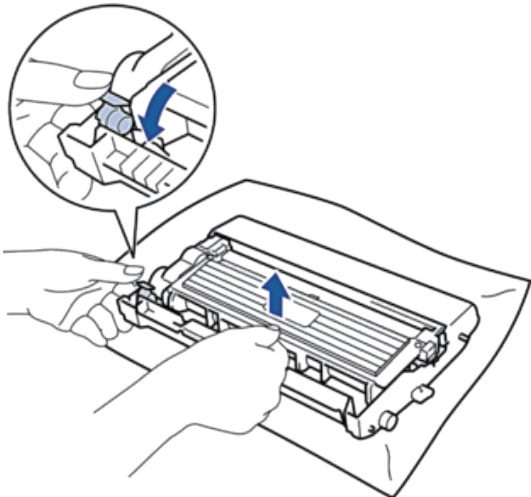
1. Press and hold  to turn off the machine.
2. Open the front cover.



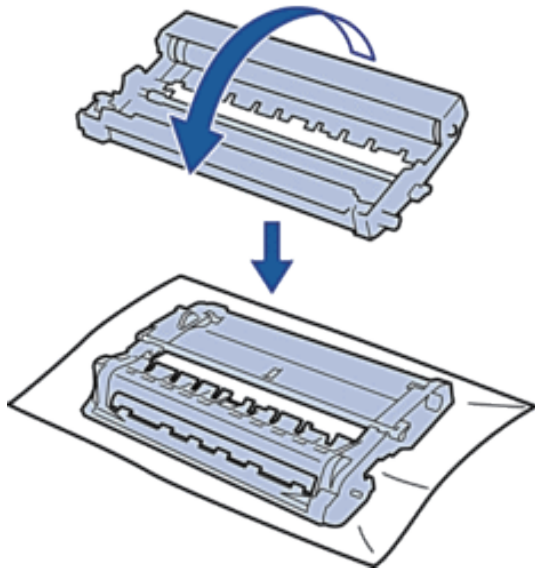
3. Remove the toner cartridge and drum unit assembly from the machine.



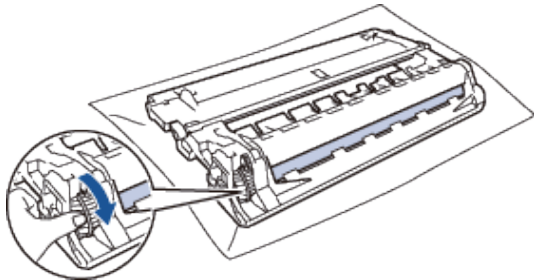
4. Push down the lock lever and take the toner cartridge out of the drum unit.



5. Turn the drum unit as shown in the illustration. Make sure that the drum unit gear is on the left side.

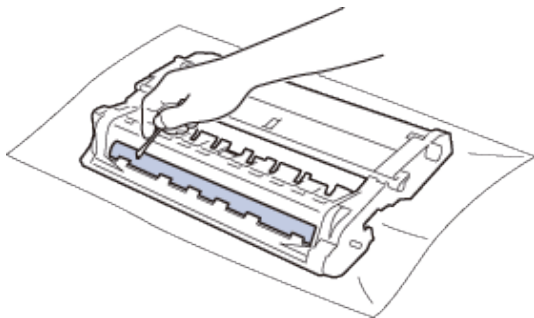


6. Turn the edge of the drum unit toward you by hand while looking at surface of the suspected area.



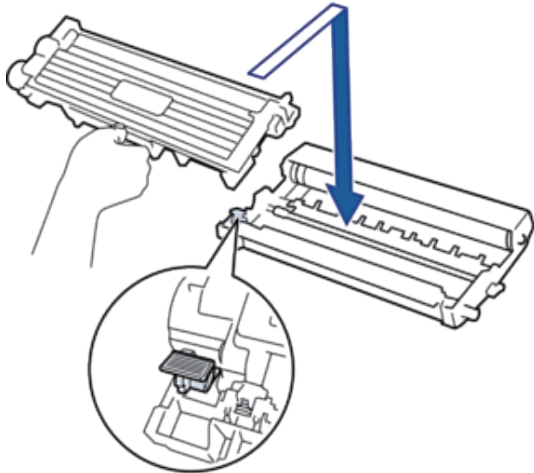
**NOTE:** To avoid print quality problems, DO NOT touch the surface of the drum unit except the edge.

7. Wipe the surface of the drum gently with a dry cotton swab until the mark on the surface comes off.



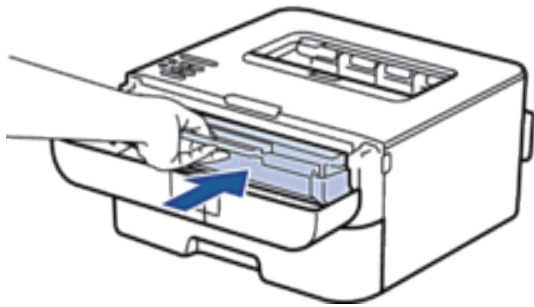
**NOTE:** DO NOT clean the surface of the photosensitive drum with a sharp object or any liquids.

8. Put the new toner cartridge firmly into the drum unit until you hear it lock into place.




**NOTE:** Make sure you put the toner cartridge in correctly or it may separate from the drum unit.

9. Install the toner cartridge and drum unit assembly back into the machine.



10. Close the front cover of the machine.

11. Press  to turn on the machine.


## Clean the Paper Pick-up Rollers

Cleaning the paper pick-up rollers periodically may prevent paper jams by insuring the proper feeding of paper.

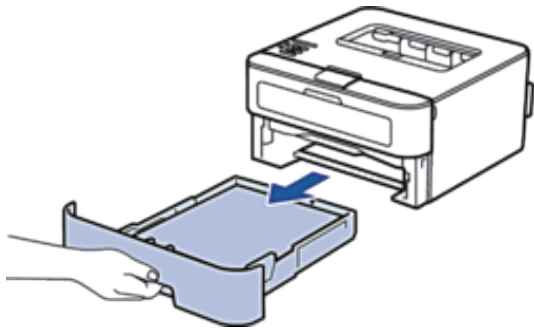
---

If you have paper feed problems, clean the pick-up rollers as follows:

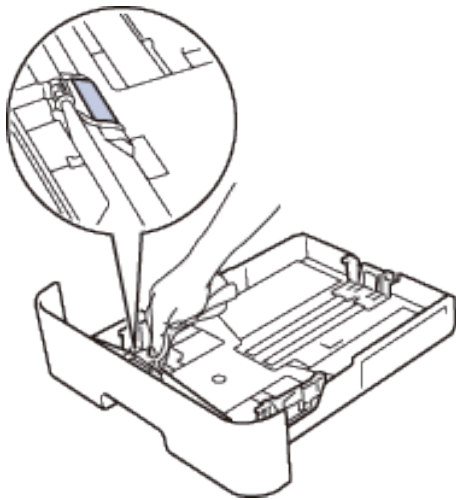
---

1. Press and hold  to turn off the machine.
2. Pull the paper tray completely out of the machine.

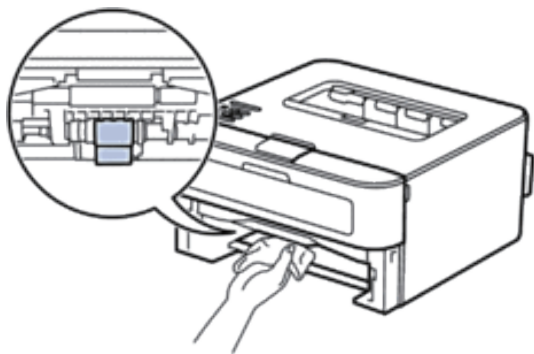





3. If paper is loaded or something is stuck inside in the paper tray, remove it.
4. Tightly wring out a lint-free cloth soaked in lukewarm water, and then wipe the separator pad on the paper tray to remove dust.



5. Wipe the two pick-up rollers inside the machine to remove dust.




6. Reload the paper and put the paper tray firmly back in the machine.
7. Press  to turn on the machine.

## Check the Remaining Life of Parts

1. Press ▲ or ▼ to display the `Machine Info.` option, and then press **OK**.
2. Press ▲ or ▼ to select the `Parts Life` option, and then press **OK**.
3. Press ▲ or ▼ to select the `Toner Life` or `Drum Life` option, and then press **OK**.

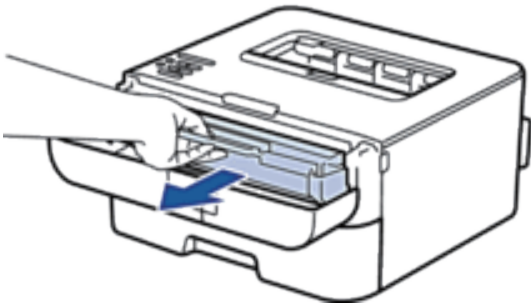
## Pack and Ship Your Dell Machine

**NOTE:** If for any reason you must ship your machine, carefully repack the machine in the original packaging to avoid any damage during transit. The machine should be adequately insured with the carrier.

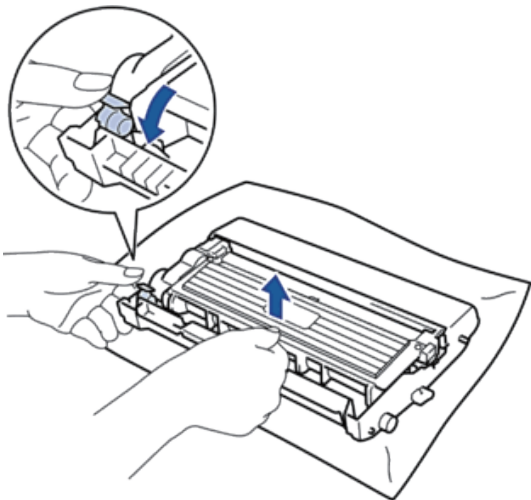
1. Press and hold  to turn off the machine. Leave the machine turned off for at least 10 minutes to cool down.
2. Disconnect all the cables, and then unplug the power cord from the AC power outlet.

**NOTE:** The machine is equipped with a non-detachable AC power cord depending on the model.

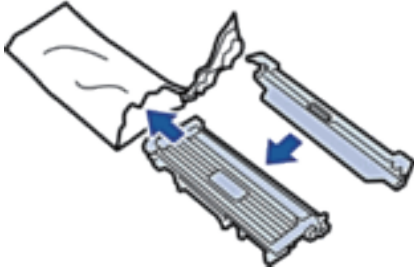
3. Remove the toner cartridge and drum unit assembly.



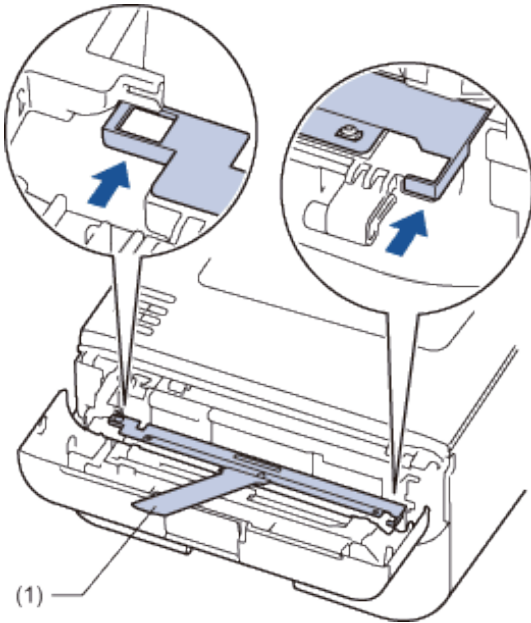
4. Push down the lock lever and take the toner cartridge out of the drum unit.



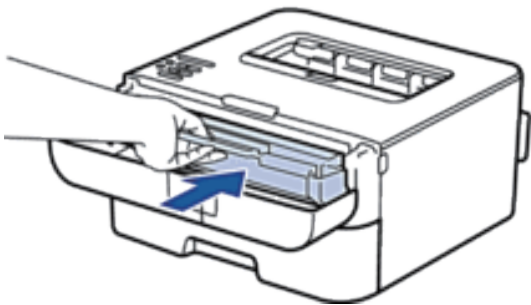
5. Put the protective material on the toner cartridge. Put it in a plastic bag.



**6.** Put the protective material (1) in the machine to the left as shown in the illustration.



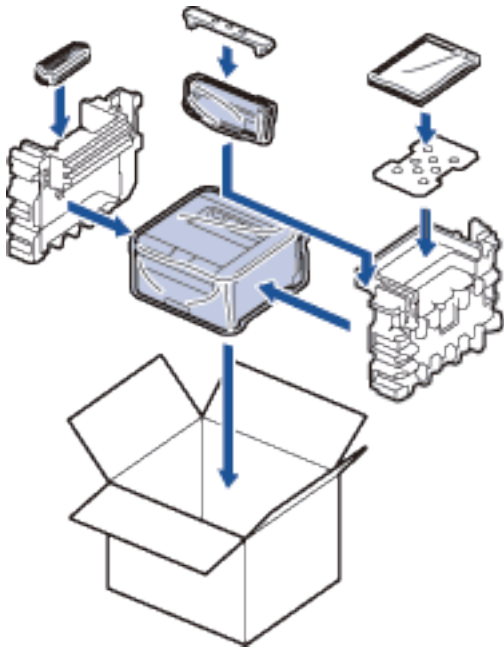
**7.** Install only the drum unit back into the machine.



**8.** Close the front cover.

**9.** Put the machine into the bag it originally came in.

**10.** Pack the machine and the printed materials in the original carton with the original packing material as shown below.



**NOTE:** Put the AC power cord and printed materials in the original carton as shown in the illustration.

**11.** Close the carton and tape it shut.

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# Machine Settings

- General Settings
- Menu Table

## General Settings

- **Set Sleep Mode Countdown**  
The Sleep Mode (or Power Save Mode) setting can reduce power consumption. Select how long the machine must be idle before it goes into Sleep Mode. The Sleep Mode timer is reset when the machine receives a print job.
- **About Deep Sleep Mode**  
If the machine is in Sleep Mode and does not receive any jobs for certain length of time, based on your model and settings, the machine will automatically enter Deep Sleep Mode. You can set the length of time before the machine enters Deep Sleep Mode between 10 to 60 minutes. The default time is 11 minutes.
- **Set Auto Power Off Mode**  
If the machine is in Deep Sleep Mode for certain length of time, based on your model and settings, the machine will go into Power Off Mode automatically. The machine does not go into Power Off Mode when the machine is connected to a wired or wireless network.
- **Set Continue Mode**  
Turn on Continue Mode to force the machine to continue printing even if the control panel indicates that it is time to replace the toner cartridge. When the Replace Toner error message is active, you cannot turn this mode on unless you change the toner cartridge.
- **Set Toner Save Mode**  
Save toner using Toner Save Mode. When you set Toner Save to On , the print appears lighter. The default setting is Off.
- **Set Quiet Mode**  
Use Quiet Mode to reduce printing noise. When Quiet Mode is turned On, the print speed becomes slower. The factory setting is Off.

## Set Sleep Mode Countdown

The Sleep Mode (or Power Save Mode) setting can reduce power consumption. Select how long the machine must be idle before it goes into Sleep Mode. The Sleep Mode timer is reset when the machine receives a print job.

---

When the machine is in Sleep Mode, it acts as if it is turned off. The machine will wake up and start printing when it receives a print job. Use these instructions to set a time delay to send the machine into Sleep Mode.

---

1. Press ▲ or ▼ to select the **General Setup** option, and then press **OK**.
2. Press ▲ or ▼ to select the **Ecology** option, and then press **OK**.
3. Press ▲ or ▼ to select the **Sleep Time** option, and then press **OK**.
4. Press ▲ or ▼ to enter the length of time, in minutes, that the machine should remain idle before entering

Sleep Mode.  
Press **OK**.

## About Deep Sleep Mode

If the machine is in Sleep Mode and does not receive any jobs for certain length of time, based on your model and settings, the machine will automatically enter Deep Sleep Mode. You can set the length of time before the machine enters Deep Sleep Mode between 10 to 60 minutes. The default time is 11 minutes.

- Deep Sleep Mode uses less power than Sleep Mode.
- The machine will wake up and start printing if it receives a print job.

## Set Auto Power Off Mode

If the machine is in Deep Sleep Mode for certain length of time, based on your model and settings, the machine will go into Power Off Mode automatically. The machine does not go into Power Off Mode when the machine is connected to a wired or wireless network.

- 
- To start printing, press  on the control panel and then send a print job.
- 

**NOTE:** Select how long the machine must be in Deep Sleep Mode before it goes into Auto Power Off Mode.

1. Press **▲** or **▼** to select the **General Setup** option, and then press **OK**.
2. Press **▲** or **▼** to select the **Ecology** option, and then press **OK**.
3. Press **▲** or **▼** to select the **Auto Power Off** option, and then press **OK**.
4. Press **▲** or **▼** to select the **Off**, **1 hour**, **2 hours**, **4 hours**, or **8 hours** option, and then press **OK**.

## Set Continue Mode

Turn on Continue Mode to force the machine to continue printing even if the control panel indicates that it is time to replace the toner cartridge. When the Replace Toner error message is active, you cannot turn this mode on unless you change the toner cartridge.

---

We recommend changing the toner cartridge as soon as possible. Print may appear faint when the Continue Mode is On; we cannot guarantee print quality. The factory setting is Off.

---

1. Press **▲** or **▼** to select the **General Setup** option, and then press **OK**.
2. Press **▲** or **▼** to select the **Replace Toner** option, and then press **OK**.
3. Press **▲** or **▼** to select the **Continue** or **Stop** option.  
Press **OK**.



## Set Toner Save Mode

Save toner using Toner Save Mode. When you set Toner Save to On , the print appears lighter. The default setting is Off.

1. Press ▲ or ▼ to select the **General Setup** option, and then press **OK**.
2. Press ▲ or ▼ to select the **Ecology** option, and then press **OK**.
3. Press ▲ or ▼ to select the **Toner Save** option, and then press **OK**.
4. Press ▲ or ▼ to select the **On or Off** option.  
Press **OK**.

## Set Quiet Mode

Use Quiet Mode to reduce printing noise. When Quiet Mode is turned On, the print speed becomes slower. The factory setting is Off.

1. Press ▲ or ▼ to select the **General Setup** option, and then press **OK**.
2. Press ▲ or ▼ to select the **Ecology** option, and then press **OK**.
3. Press ▲ or ▼ to select the **Quiet Mode** option, and then press **OK**.
4. Press ▲ or ▼ to select the **On or Off** option.  
Press **OK**.

## Menu Table

- Access Menus and Change Your Machine the Settings  
Use the control panel to access the machine's menus and change various settings.
- Settings Table  
Use these tables to understand the various menu and options that you will use to set your preferences on the machine.

## Access Menus and Change Your Machine the Settings

Use the control panel to access the machine's menus and change various settings.

1. Scroll through each menu level by pressing ▲ or ▼ .
2. When the option you want appears on the LCD, press **OK**.  
The LCD displays the next menu level.
3. Press ▲ or ▼ to scroll to your selection.
4. Press **OK**.
5. When you have finished setting an option, the LCD displays **Accepted**.

## Settings Table

Use these tables to understand the various menu and options that you will use to set your preferences on the machine.

## Machine Info.

Level 1	Level 2	Description
Print Settings	-	Prints the Printer Settings page.
Print NetSetting	-	Prints the Network Configuration Report.
Print WLANReport	-	Prints the result of wireless LAN connectivity diagnosis.
Test Print	-	Prints the test page.
Demo Print	-	Prints the demonstration sheet.
Print Font	-	Prints the font list.
Serial No.	-	Displays the machine's serial number.
Version	Main Version	Displays the main firmware version.
	Sub1 Version	Displays the sub firmware version.
	RAM Size	Displays the size of memory in this machine.
Page Count	-	Displays the total printed pages.
Parts Life	Toner Life	Displays the remaining life for toner cartridge.
	Drum Life	Displays the remaining life for the drum unit.

## Paper Tray

Level 1	Description
Manual Feed	Select whether to print from the Manual Feed Slot.
2-sided	Select whether to print on both sides of the paper.
Tray1 Size	Select the size of paper you loaded in the standard paper tray.
Check Size	Select whether to display the message telling you to check that the size of the paper in the machine and the machine's Paper Size setting match.

## General Setup

Level 1	Level 2	Description
Local Language	-	Select the LCD language for your country.
Resolution	-	Select a print resolution.
Density	-	Increases or Decreases the print density.
Ecology	Toner Save	Increases the page yield of the toner cartridge.
	Sleep Time	Set the time to return to Power Saving Mode.
	Quiet Mode	Decreases printing noise.
	Auto Power Off	Sets the number of hours that the machine will remain in Deep Sleep Mode before going into Power Off Mode.
Panel Control	Button Repeat	Sets the time for the LCD message to change when holding ▲ or ▼ at intervals.
	Message Scroll	Sets the time in seconds that an LCD message will scroll across the LCD. From Level 1=0.2 sec to Level 10=2.0 sec.
	LCD Contrast	Adjusts the contrast of the LCD.
	Auto Online	Sets the machine to return to Ready Mode after it has been idle for 30 seconds. If you select the setting to be Off, the machine cannot receive print jobs while it has been left in Menu Mode.
Setting Lock	-	Turns the lock panel settings by using the password.

Interface	Select	Select the interface to use. If you choose Auto, the machine automatically changes the interface to USB or Ethernet depending on which interface is receiving data.
	Auto IF Time	You must set the time-out period for the auto interface selection.
	Input Buffer	Increases or decreases the input buffer capacity.
Replace Toner	-	Sets the machine to continue printing after the LCD displays Replace Toner

## Print Menu

Level 1	Level 2	Description
Auto Continue	-	Select this setting if you want the machine to clear paper size errors.
Media Type	-	Sets the type of paper.
Paper	-	Sets the size of paper.
Copies	-	Sets the number of printed pages.
Orientation	-	This machine can print pages in portrait or landscape orientation.
Print Position	X Offset	Moves the print start position (at the top-left corner of pages) horizontally up to -500 (left) to +500 (right) dots in 300 dpi.
	Y Offset	Moves the print start position (at the top-left corner of pages) vertically up to -500 (up) to +500 (down) dots in 300 dpi.
Auto FF	-	Allows the machine to print any remaining data automatically.
PCL Setting	Font No.	Sets the font number.
	Font Pitch	Sets the font pitch. The Font Pitch menu will appear when you choose I042 to I054 in Font No. setting.
	Font Point	Sets the font size. The Font Point menu will appear when you choose I000 to I041 in Font No. setting.
	Symbol Set	Sets the symbol set or the character set.
	Table Print	Prints the code table.
	Auto LF	ON: CR -> CR+LF, OFF: CR -> CR
	Auto CR	ON: LF -> LF+CR, FF -> FF+CR, or VT -> VT+CR OFF: LF -> LF, FF -> FF, or VT -> VT
	Auto WRAP	Chooses whether a line feed and carriage return will happen when the machine reaches the right margin.
	Auto SKIP	Chooses whether a line feed and carriage return will happen when the carriage position reaches the bottom margin.
	Left Margin	Sets the left margin at column 0 to 70 columns at 1 cpi.
	Right Margin	Sets the right margin at column 10 to 80 columns at 1 cpi.
	Top Margin	Sets the top margin at a distance from the top edge of the paper.
	Bottom Margin	Sets the bottom margin at a distance from the bottom edge of the paper.
Lines	Sets the number of lines on each page.	

## Network

Level 1	Level 2	Level 3	Description
Wired LAN	TCP/IP	Boot Method	Chooses the IP method that best suits your needs.
		IP Address	Enter the IP address.
		Subnet Mask	Enter the Subnet mask.
		Gateway	Enter the Gateway address.
		IP Boot Tries	Specifies the number of attempts the machine will try to obtain an IP address when the Boot Method is set to any setting except Static.
		APIPA	Automatically allocates the IP address from the link-local address range.
		IPv6	Enables or disables the IPv6 protocol.
	Ethernet	-	Chooses the Ethernet link mode.
	Wired Status	-	Displays Ethernet link status.
	MAC Address	-	Displays MAC address of the machine.
	Set to Default	-	Restores wired network settings of the internal print server to the factory settings.
Wired Enable	-	Turns the wired interface on or off.	
WLAN	TCP/IP	Boot Method	Chooses the IP method that best suits your needs.
		IP Address	Enter the IP address.
		Subnet Mask	Enter the Subnet mask.
		Gateway	Enter the Gateway address.
		IP Boot Tries	Specifies the number of attempts the machine will try to obtain an IP address when the Boot Method is set to any setting except Static.
		APIPA	Automatically allocates the IP address from the link-local address range <sup>1</sup> .
		IPv6	Enables or Disables the IPv6 protocol.
	Setup Wizard	-	Configures the wireless network settings using the setup wizard.
	WPS/AOSS	-	Configures the wireless network settings using WPS or AOSS™ method.
	WPS w/PIN Code	-	Configures the wireless network settings using WPS with a PIN code.
	WLAN Status	Status	Displays wireless Ethernet link status.
		Signal	Displays the signal condition.
		Channel	Displays the channel in use when Status is Active.
		Speed	Displays the connecting speed when Status is Active.
		SSID	Displays SSID.
Comm. Mode	Displays the current Communication Mode.		
MAC Address	-	Displays MAC address of the machine.	
Set to Default	-	Restores wireless network settings of the internal print server to the factory settings.	
WLAN Enable	-	Turns the wireless interface on or off.	

Wi-Fi Direct	Push Button	-	You can easily configure your Wi-Fi Direct™ network settings using the one-button push method.	
	PIN Code	-	You can easily configure your Wi-Fi Direct™ network settings using WPS with a PIN code.	
	Manual	-	You can manually configure your Wi-Fi Direct™ network settings.	
	Group Owner	-	Sets your machine as the Group Owner.	
	Device Info.	Device Name		You can see the device name of your machine.
		SSID		Displays SSID of Group Owner.
		IP Address		Displays the IP Address of your machine.
	Status Info.	Status		Displays the Wi-Fi Direct™ network status.
		Signal		Displays the current Wi-Fi Direct™ network signal strength. When your machine acts as Group Owner, the LCD always displays <b>Strong</b> .
		Channel		Displays the channel in use when the Status is <i>G/O Active</i> or <i>Client Active</i> .
Speed			Displays the connecting speed when the Status is <i>G/O Active</i> or <i>Client Active</i> .	
I/F Enable	-	Enables or disables the Wi-Fi Direct™ connection.		
Network Reset	-	-	Restores all network settings of the internal print server to the factory settings.	

\*1 On connection to the network, if the machine's 'Boot Method' is 'Auto' the machine will attempt to set the IP address and Subnet Mask from a boot server such as DHCP. If a boot server cannot be found, an APIPA IP address will be allocated, such as 169. 254. [001-254]. [000-255]. If the 'Boot Method' of the machine is set to 'Static' you must manually enter an IP address from the machine's control panel.

### Reset Menu

Level 1	Description
Network	Restores all network settings of the internal print server to the factory settings.
Factory Reset	Resets the machine and restores the printer settings (including command settings) to the factory settings.



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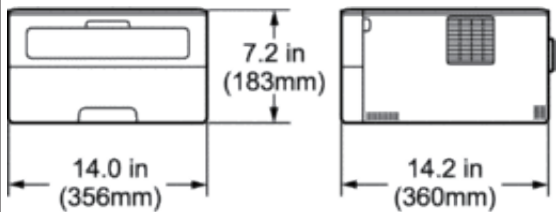




# Specifications

- General Specifications
- Print Media Specifications
- Printer Specifications
- Interface Specifications
- Supported Protocols and Security Features
- Computer Requirements Specifications

## General Specifications

Printer Type		Laser	
Print Method		Electrophotographic Laser Printer	
Memory Capacity	Standard	32 MB	
LCD (liquid crystal display)		16 characters × 1 line	
Power Source		For US region:110 - 120 V AC 50/60 Hz For EU region:220 - 240 V AC 50/60 Hz	
Power Consumption <sup>*1</sup> (Average)	Peak	Approximately 1080 W	
	Printing	For US region:Approximately 468 W at 77 °F (25 °C) For EU region:Approximately 455 W at 77 °F (25 °C)	
	Ready	Approximately 58 W at 77 °F (25 °C)	
	Sleep	For US region:Approximately 3.9 W For EU region:Approximately 5.4 W	
	Deep Sleep	For US region:Approximately 0.8 W For EU region:Approximately 1.5 W <sup>*2</sup>	
	Power Off <sup>*3 *4</sup>	For US region:Approximately 0.02 W For EU region:Approximately 0.06 W	
Dimensions			
Weights (with supplies)		15.0 lb (6.8 kg)	
Noise Level	Sound Pressure	Printing	LpAm = 50 dB (A)
		Ready	LpAm = 31 dB (A)
	Sound Power	Printing	LWAd = 6.4 B (A)
		Ready	LWAd = 4.6 B (A)
Temperature	Operating	50 °F to 90 °F (10 to 32 °C)	
	Storage	32 °F to 104 °F (0 to 40 °C)	
Humidity	Operating	20 to 80% (without condensation)	
	Storage	35 to 85% (without condensation)	

\*1 Measured when the machine is connected to the USB interface.

\*2 This condition is equivalent to Network standby mode, the power consumption in this condition is that all wired network ports are connected and all wireless network ports are activated.

\*3 Measured according to IEC 62301 Edition 2.0.

\*4 Power consumption varies slightly depending on the usage environment.

## Print Media Specifications

Paper Input	Paper Tray	Paper Type	Plain Paper, Thin Paper, Recycled Paper
		Paper Size	A4, Letter, A5, A5 (Long Edge), A6, Executive, Legal, Folio
		Paper Weight	16 to 28 lb (60 to 105 g/m <sup>2</sup> )
		Maximum Paper Capacity	Up to 250 sheets of 20 lb (80 g/m <sup>2</sup> ) plain paper
	Manual Feed Slot	Paper Type	Plain Paper, Thin Paper, Thick Paper, Thicker Paper, Recycled Paper, Bond Paper, Label, Envelope, Env.Thin, Env.Thick
		Paper Size	Width: 3.0 to 8.5 in (76.2 to 215.9 mm) Length: 5 to 14 in (127 to 355.6 mm)
Paper Weight		16 to 43 lb (60 to 163 g/m <sup>2</sup> )	
Paper Output *1	Face-Down Output Tray	Up to 100 sheets of 20 lb (80 g/m <sup>2</sup> ) Plain Paper (face-down delivery to the face-down output paper tray)	
	Face-Up Output Tray	One sheet (face-up delivery to the face-up output tray)	
2-sided	Automatic 2-sided Printing	Paper Type	Plain Paper, Thin Paper, Recycled Paper
		Paper Size	For US region:Letter, Legal, Folio For EU region:A4
		Paper Weight	16 to 28 lb (60 to 105 g/m <sup>2</sup> )

\*1 For labels, we recommend removing the printed sheets from the output paper tray immediately after they exit the machine to avoid the possibility of smudging.

## Printer Specifications

Automatic 2-sided Print		Yes
Emulation		PCL6, XPS
Resolution		600 dpi × 600 dpi, HQ1200 (2400dpi × 600 dpi) quality
Print Speed *1 *2	single side print	Up to 27 pages/minute (Letter size) Up to 26 pages/minute (A4 size)
	2-sided	Up to 13 sides/minute (6.5 sheets per minute) (Letter or A4 size)
First Print Time *3		Less than 8.5 seconds at 73.4 °F (23 °C) / 115 V

\*1 The print speed may change depending on the type of document you print.

\*2 Print speed may be slower when the machine is connected by wireless LAN.

\*3 From Ready mode and standard tray

## Interface Specifications

USB *1 *2	Hi-Speed USB 2.0 Use a USB 2.0 interface cable that is no longer than 6 feet (2 m).
LAN	10BASE-T / 100BASE-TX Use a straight-through Category 5 (or greater) twisted-pair cable.
Wireless LAN	IEEE 802.11b/g/n (Infrastructure/Ad-hoc Mode) IEEE 802.11g/n (Wi-Fi Direct™ )

\*1 Your machine has a USB 2.0 Hi-Speed interface. The machine can also be connected to a computer that has a USB 1.1 interface.

\*2 Third party USB ports are not supported.

## Supported Protocols and Security Features

### Ethernet

10Base-T/100Base-TX

### Wireless LAN

IEEE 802.11b/g/n (Infrastructure Mode/Ad-hoc Mode), IEEE 802.11g/n (Wi-Fi Direct)

### Protocols (IPv4)

ARP, RARP, BOOTP, DHCP, APIPA(Auto IP), WINS/NetBIOS name resolution, DNS resolver, mDNS, LLMNR responder, LPR/LPD, Custom Raw Port/Port 9100, IPP, FTP Server, SNMPv1/v2c/v3, HTTP Server, TFTP Client and Server, SMTP Client, ICMP, Web Services (Print)

### Protocols (IPv6)

NDP, RA, DNS Resolver, mDNS, LLMNR responder, LPR/LPD, Custom Raw Port/ Port 9100, IPP, FTP Server, SNMPv1/v2c/v3, HTTP Server, TFTP Client and Server, SMTP Client, ICMPv6, Web Services (Print)

### Network Security (Wired)

SMTP-AUTH, SNMP v3

### Network Security (Wireless)

SMTP-AUTH, SNMP v3

### Wireless Network Security

WEP 64/128 bit, WPA-PSK (TKIP/AES), WPA2-PSK (AES)

### Wireless Certification

Wi-Fi Certification Mark License (WPA™/WPA2™ - Personal), Wi-Fi Protected Setup (WPS) Identifier Mark License, AOSS Logo, Wi-Fi CERTIFIED Wi-Fi Direct

## Computer Requirements Specifications

Supported Operating Systems And Software Functions

Computer Platform & Operating System Version	PC Interface			Processor	Hard Disk Space to install
	USB *1	10/100 Base-TX (Ethernet)	Wireless 802.11b/ g/n		

Windows® Operating System	Windows Vista®	Printing	32 bit (x86) or 64 bit (x64) processor	80 MB
	Windows®7			
	Windows®8			
	Windows®8.1			
	Windows Server®2003	Printing	32 bit (x86) or 64 bit (x64) processor	
	Windows Server®2003 x64 Edition		64 bit (x64) processor	
	Windows Server®2008		32 bit (x86) or 64 bit (x64) processor	
	Windows Server®2008 R2		64 bit (x64) processor	
	Windows Server®2012			
	Windows Server®2012 R2			
Macintosh Operating System	OS X v10.8.x	Printing	Intel®Processor	80 MB
	OS X v10.9.x			
	OS X v10.10.x			

\*1 Third party USB ports are not supported.

For the latest driver updates, go to the download page for your model on the Dell website at <http://www.dell.com/>.

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## How to Enter Text on Your Dell Machine

- When setting certain menu selections, such as the Network Key, you will need to enter text characters.
- Hold down or repeatedly press ▲ or ▼ to select a character from the list below:  
0123456789abcdefghijklmnopqrstuvwxyzABCDEFGHIJKLMNOPQRSTUVWXYZ(space)!"#\$%&'()\*+,-./:;<=>?@[]^\_
- Press **OK** to confirm the current character and then enter the next character.
- Press **Back** to delete the characters you have entered.





Environmental Information Notice ..... 195



# Environmental Information Notice

At Dell, we aim to make “being environmentally conscious” easier, more efficient and more cost effective for our customers. We thank you for choosing Dell printers, and here are some useful environmental information regarding this printer before you begin using:

- 1.** Choice to print on various print media ranging from recycled, virgin paper to light weight paper in the range of 60-163 g/m<sup>2</sup> certified under environmental stewardship initiatives.
- 2.** Choice to print on 60 g/m<sup>2</sup> paper which contains less raw material per print, helping you contribute to saving significant environment resources.
- 3.** Designed to be energy efficient with power saving modes, your new Dell printer is Energy Star qualified so you consume less power during printing and standby modes. Efficient power management in your Dell printer helps you conserve energy resources and gain cost savings for your power usage.
- 4.** If supported, use duplex printing function to print on both sides of paper so you can help reduce the consumption of raw materials used to manufacture paper.  
Information on setting the supported duplex printing function as default can be found on the printer User's Guide found on the Software and Documentation disc. For the latest User's Guide, check our website at [support.dell.com](http://support.dell.com).

For detail information on environmental performance of product, visit Dell Regulatory Environment Data Sheet website at [www.dell.com/regulatory\\_compliance](http://www.dell.com/regulatory_compliance).

For detail information on paper types and toner/ink cartridge yields for this printer, check your local country Dell website for the printer information at [dell.com](http://dell.com).



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# Appendix

Dell™ Technical Support Policy  
Warranty and Return Policy  
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## Dell™ Technical Support Policy

Technician-assisted technical support requires the cooperation and participation of the customer in the troubleshooting process and provides for restoration of the operating system, software program and hardware drivers to the original default configuration as shipped from Dell, as well as the verification of appropriate functionality of the printer and all Dell-installed hardware. In addition to this technician assisted technical support, online technical support is available at Dell Support. Additional technical support options may be available for purchase.

### Online Services

You can learn about Dell products and services on the following websites:

- [www.dell.com](http://www.dell.com)
- [www.dell.com/ap](http://www.dell.com/ap) (Asian/Pacific countries only)
- [www.dell.com/jp](http://www.dell.com/jp) (Japan only)
- [www.euro.dell.com](http://www.euro.dell.com) (Europe only)
- [www.dell.com/la](http://www.dell.com/la) (Latin American and Caribbean countries)
- [www.dell.ca](http://www.dell.ca) (Canada only)

You can access Dell Support through the following websites and e-mail addresses:

- Dell Support websites  
[dell.com/support](http://dell.com/support)  
[support.jp.dell.com](http://support.jp.dell.com) (Japan only)  
[support.euro.dell.com](http://support.euro.dell.com) (Europe only)
- Dell Support e-mail addresses  
[mobile\\_support@us.dell.com](mailto:mobile_support@us.dell.com)  
[support@us.dell.com](mailto:support@us.dell.com)  
[la-techsupport@dell.com](mailto:la-techsupport@dell.com) (Latin America and Caribbean countries only)  
[apsupport@dell.com](mailto:apsupport@dell.com) (Asian/Pacific countries only)
- Dell Marketing and Sales e-mail addresses  
[apmarketing@dell.com](mailto:apmarketing@dell.com) (Asian/Pacific countries only)  
[sales\\_canada@dell.com](mailto:sales_canada@dell.com) (Canada only)
- Anonymous file transfer protocol (FTP)  
[ftp.dell.com](ftp://ftp.dell.com)  
Log in as user: "anonymous", and use your e-mail address as your password.

## Warranty and Return Policy

Dell Inc. ("Dell") manufactures its hardware products from parts and components that are new or equivalent to new in accordance with industry-standard practices. For information about the Dell warranty for your printer, see [www.dell.com/support](http://www.dell.com/support).

### Recycling Information

It is recommended that customers dispose of their used computer hardware, monitors, printers, and other peripherals in an environmentally sound manner. Potential methods include reuse of parts or whole products and recycling of products, components, and/or materials.

For specific information on Dell's worldwide recycling programs, see [www.dell.com/recycle](http://www.dell.com/recycle).

## Contacting Dell

You can access Support for Home at [dell.com/support](http://dell.com/support). Select your region, enter the Service Tag of your printer and click Submit to access help tools and information.

You can contact Dell electronically using the following addresses:

- World Wide Web
  - [www.dell.com](http://www.dell.com)
  - [www.dell.com/ap](http://www.dell.com/ap) (Asian/Pacific countries only)
  - [www.dell.com/jp](http://www.dell.com/jp) (Japan only)
  - [www.euro.dell.com](http://www.euro.dell.com) (Europe only)
  - [www.dell.com/la](http://www.dell.com/la) (Latin American and Caribbean countries)
  - [www.dell.ca](http://www.dell.ca) (Canada only)
- Anonymous file transfer protocol (FTP)
  - [ftp.dell.com](ftp://ftp.dell.com)
  - Log in as user: "anonymous", and use your e-mail address as your password.
- Electronic Support Service
  - [mobile\\_support@us.dell.com](mailto:mobile_support@us.dell.com)
  - [support@us.dell.com](mailto:support@us.dell.com)
  - [la-techsupport@dell.com](mailto:la-techsupport@dell.com) (Latin America and Caribbean countries only)
  - [apsupport@dell.com](mailto:apsupport@dell.com) (Asian/Pacific countries only)
  - [support.jp.dell.com](mailto:support.jp.dell.com) (Japan only)
  - [support.euro.dell.com](mailto:support.euro.dell.com) (Europe only)
- Electronic Quote Service
  - [apmarketing@dell.com](mailto:apmarketing@dell.com) (Asian/Pacific countries only)
  - [sales\\_canada@dell.com](mailto:sales_canada@dell.com) (Canada only)



## Additional documents for Important Information

### SAFETY: Laser Printer

Internal laser radiation

Max. Radiation Power: 25mW

Wave Length: 770 - 800 nm

Laser Class: Class 3B

### SAFETY: General Safety

- Ventilate well during extended operation or mass copying. It may affect the office air environment due to odor such as ozone in a poorly ventilated room. Provide proper ventilation to ensure the comfortable and safe environment.
- This equipment is also designed for IT power system with phase to phase voltage 230V.  
(For Norway Only).

### FCC Part68 comment,

- If your home has specially wired alarm equipment connected to the telephone line, ensure the installation of this equipment does not disable your alarm equipment. If you have questions about what will disable alarm equipment, call your telephone company or a qualified installer.

### Information regarding recycled paper

- Recycled paper is of the same quality of paper made from original forest sources. Standards governing modern recycled paper ensure that it meets the highest quality requirements for different printing processes. The imaging equipment supplied by the VA signatories is suitable for using with recycled paper meeting the EN 12281:2002 standard.
- Purchasing recycled paper saves natural resources and promotes the circular economy. Paper is made using cellulose fibres from wood. Collecting and recycling paper extends the life of fibres over multiple life cycles making the best use of the resources.
- The recycled paper production process is shorter. The fibres have already been processed; so less water, chemicals and energy are used.
- Paper recycling has the benefit of saving carbon by diverting paper products from alternative disposal routes such as landfill and incineration. Landfill waste emits methane gas which has a powerful greenhouse effect.

### Requisite for R&TTE



## **Additional information for installation**

If user can't install Page Manager properly, below message is shown.

“The OCR software must be installed to use this feature.

Before installing, ensure that your computer has access to the internet.

To install, click the PageManager (OCR) button. “

## **Printing With Mopria™**

Mopria-certified mobile devices can connect and print to certify printer. Either connect your mobile devices to the same network as the printer or make a direct connection with Wi-Fi Direct®.

Works with Mopria-certified smartphones and tablets or Android 4.4 devices with the Mopria Print Service download from Google Play.

<https://play.google.com/store/apps/>

<http://www.mopria.org/>

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# Glossary

This is a comprehensive list of features and terms that appear in Dell manuals. Availability of these features depends on the model you purchased.

## A

### **Ad-Hoc Mode**

The mode of operation in a wireless network, in which all devices (machines and computers) are connected without an access point/router.

### **AES**

Advanced Encryption Standard (AES) is the Wi-Fi®-authorized strong encryption standard.

### **AOSS™**

AirStation One-Touch Secure System (AOSS™) is a system provided by Buffalo Technology. AOSS™ allows you to configure a secure wireless connection with the push of a button.

### **APIPA**

If you do not assign an IP address manually (using the control panel [for LCD models] of the machine) or automatically (using a DHCP, BOOTP, or RARP server), the Automatic Private IP Addressing (APIPA) protocol will automatically assign an IP address from the range 169.254.1.0 to 169.254.254.255.

### **ARP**

Address Resolution Protocol (ARP) performs mapping of an IP address to a MAC address in a TCP/IP network.

### **Authentication**

Most wireless networks use some kind of security settings. These security settings define the authentication (how the device identifies itself to the network) and encryption (how the data is encrypted as it is sent on the network). If you do not correctly specify these options when you are configuring your Dell wireless machine, it will not be able to connect to the wireless network. Therefore, care must be taken when configuring these options.

#### **Authentication Methods for a Personal Wireless Network**

A personal wireless network is a small network (such as a home wireless network) without IEEE 802.1x support.

- Open system

Wireless devices are allowed to access the network without any authentication.

- Shared key

A secret pre-determined key is shared by all devices that will access the wireless network. The Dell wireless machine uses the WEP key as the pre-determined key.

- WPA-PSK/WPA-2-PSK

Enables a Wi-Fi Protected Access®Pre-shared key (WPA-PSK/WPA2-PSK), which enables the Dell wireless machine to associate with access points using TKIP for WPA-PSK or AES for WPA-PSK and WPA2-PSK (WPA-Personal).

## B

### **BOOTP**

The Bootstrap Protocol (BOOTP) is a network protocol used by a network client to obtain an IP Address from a configuration server.

**NOTE:** To use BOOTP, contact your network administrator.

## C

### Channels

Wireless networks use channels. Each wireless channel is on a different frequency. There are up to 14 different channels that can be used when using a wireless network. However, in many countries the number of channels available is restricted.

### Custom Raw Port

Custom raw port is a commonly used printing protocol on a TCP/IP network that enables interactive data transmission. Default is Port 9100.

## D

### Density

Changing the Density makes the whole image lighter or darker.

### DHCP

The Dynamic Host Configuration Protocol (DHCP) is a network protocol that is used to configure network devices so that they can communicate on an IP Network.

**NOTE:** To use DHCP, contact your network administrator.

### Digital Signature

A Digital Signature is a value computed with a cryptographic algorithm and appended to a data object in such a way that any recipient of the data can use the signature to verify the data's origin and integrity.

### DNS Client

The Dell print server supports the Domain Name System (DNS) client feature. This feature allows the print server to communicate with other devices using its DNS name.

### DNS Server

The Domain Name System (DNS) is a technology to manage the names of web sites and internet domains. A DNS server allows your computer to automatically find its IP address.

## E

### Encryption

Most wireless networks use some kind of security settings. These security settings define the authentication (how the device identifies itself to the network) and encryption (how the data is encrypted as it is sent on the network). If you do not correctly specify these options when you are configuring your Dell wireless machine, it will not be able to connect to the wireless network. Therefore, care must be taken when configuring these options.

#### Encryption Methods for a Personal Wireless Network

A personal wireless network is a small network (such as a home wireless network) without IEEE 802.1x support.

- None

No encryption method is used.

- WEP

When using Wired Equivalent Privacy (WEP) the data is transmitted and received with a secured key.

- TKIP

Temporal Key Integrity Protocol (TKIP) provides per-packet key mixing a message integrity check and rekeying mechanism.

- AES

Advanced Encryption Standard (AES) provides stronger data protection using a symmetric-key encryption.

**NOTE:** IEEE 802.11n does not support either WEP or TKIP as an encryption method.

**NOTE:** To connect to your wireless network using IEEE 802.11n, we recommend selecting AES.

## G

### Gateway

A gateway is a network point that acts as an entrance to another network and sends data transmitted via the network to an exact destination. The router knows where to direct data that arrives at the gateway. If a destination is located on an external network, the router transmits data to the external network. If your network communicates with other networks, you may need to configure the Gateway IP address. If you do not know the Gateway IP address, then contact your Network Administrator.

## H

### HTTP (Web Server)

Hypertext Transfer Protocol (HTTP) is used to transmit the data between a web server and a web browser. The Dell print server is equipped with a built-in web server that allows you to monitor its status or change some of its configuration settings using a web browser.

## I

### Infrastructure Mode

The mode of operation in a wireless network, in which all devices (machines and computers) are connected via an access point/router.

### IP Address

An Internet Protocol (IP) address is a series of numbers that identifies each device connected to a network. An IP address consists of four numbers separated by dots. Each number is between 0 and 255.

Example: In a small network, you would normally change the final number.

192.168.1. 1

192.168.1. 2

192.168.1. 3

How the IP address is assigned to your print server:

If you have a DHCP/BOOTP/RARP server in your network, the print server will automatically obtain its IP address from that server.

**NOTE:** On smaller networks, the DHCP server may also be the Router.

If you do not have a DHCP/BOOTP/RARP server, the Automatic Private IP Addressing (APIPA) protocol will automatically assign an IP address from the range 169.254.1.0 to 169.254.254.255.

## **IPP**

The Internet Printing Protocol (IPP Version 1.0) allows you to print documents directly to any accessible machine via the Internet.

## **IPv6**

IPv6 is the next generation Internet protocol.

## **L**

### **LLMNR**

The Link-Local Multicast Name Resolution (LLMNR) protocol resolves the names of neighboring computers, if the network does not have a Domain Name System (DNS) server. The LLMNR Responder feature works in both the IPv4 or IPv6 environment when using a computer that has the LLMNR Sender feature, such as Windows Vista® and Windows®7.

### **LPD**

Line Printer Daemon (LPD or LPR) protocol is a commonly-used printing protocol on a TCP/IP network, mainly for UNIX®-based operating systems.

## **M**

### **MAC Address**

The MAC Address (Ethernet Address) is a unique number assigned for the machine's network interface. You can check your machine's MAC Address on the Dell machine's control panel and in the Network Configuration Report.

### **mDNS**

Multicast DNS (mDNS) allows the Dell print server to automatically configure itself to work in an OS X Simple Network Configuration system.

## **N**

### **NetBIOS Name Resolution**

Network Basic Input/Output System (NetBIOS) name resolution enables you to obtain the IP address of the other device using its NetBIOS name during the network connection.

### **Network Configuration Report**

The Network Configuration Report prints a report listing the current network configuration, including the network print server settings.

### **Network Connection Repair Tool**

The Network Connection Repair Tool is a program Dell provides to correct the driver's settings so that they match the machine's network settings. To use the Network Connection Repair Tool, ask your network administrator.

### **Network Key**

The Network Key is a password, which is used when the data is encrypted or decrypted. The Network Key is also described as the Password, Security Key, or Encryption Key. The table shows the number of characters of the key to use for each setting.

#### **Open system/Shared key with WEP**

This key is a 64-bit or a 128-bit value that must be entered in an ASCII or hexadecimal format.



	ASCII	Hexadecimal
64 (40) bit	Uses five text characters. For example, "WLAN" (case-sensitive).	Uses 10 digits of hexadecimal data. For example, "71f2234aba" (not case-sensitive).
128 (104) bit	Uses 13 text characters. For example, "Wirelesscomms" (case-sensitive).	Uses 26 digits of hexadecimal data. For example, "71f2234ab56cd709e5412aa2ba" (not case-sensitive).

### **WPA-PSK/WPA2-PSK and TKIP or AES**

Uses a Pre-Shared Key (PSK) that is eight or more characters in length, up to a maximum of 63 characters.

### **Network Shared Printing**

Network Shared Printing is a type of printing in a network shared environment. In a network shared environment, each computer sends data via a server or print server.

### **Node Name**

The Node Name is a machine name on the network. This name is often referred to as a NetBIOS name; it will be the name that is registered by the WINS server on your network. Dell recommends the name "DELLxxxxxx" (where "xxxxxx" is the first six digits of your machine's MAC address / ethernet address.)

## **O**

### **Open System**

Open System is one of the network authentication methods. Under open system authentication, any wireless devices are allowed to access the network without requiring a WEP key.

## **P**

### **Peer-to-Peer**

Peer-to-Peer is a type of printing in a peer-to-peer environment. In a peer-to-peer environment, each computer sends and receives data directly to and from each device. There is no central server controlling access or machine sharing.

### **Protocols**

Protocols are the standardized sets of rules for transmitting data on a network. Protocols allow users to gain access to network-connected resources. The print server used on your Dell machine supports the Transmission Control Protocol/Internet Protocol (TCP/IP) protocol.

### **Public Key Cryptosystem**

A Public Key Cryptosystem is a modern branch of cryptography in which the algorithms employ a pair of keys (a public key and a private key) and use a different component of the pair for different steps of the algorithm.

## **R**

### **RARP**

Reverse Address Resolution Protocol (RARP) finds the logical address for a machine that knows only its physical address.

**NOTE:** To use RARP, contact your network administrator.

**Resolution**

The number of vertical and horizontal lines per inch.

**S****Settings Tables**

At-a-glance instructions that show all the settings and options that are available for setting up your machine.

**Shared Key Cryptosystem**

A Shared Key Cryptosystem is a branch of cryptography involving algorithms that use the same key for two different steps of the algorithm (such as encryption and decryption).

**SMTP-AUTH**

SMTP Authentication (SMTP-AUTH) expands SMTP (the Internet email sending protocol) to include an authentication method that ensures the true identity of the sender is known.

**SMTP Client**

Simple Mail Transfer Protocol (SMTP) client is used to send emails via the Internet or Intranet.

**SNMP**

The Simple Network Management Protocol (SNMP) is used to manage network devices including computers, routers and Dell network-ready machines. The Dell print server supports SNMPv1, SNMPv2c and SNMPv3.

**SNMPv3**

Simple Network Management Protocol version 3 (SNMPv3) provides user authentication and data encryption to manage network devices securely.

**SNTP**

The Simple Network Time Protocol (SNTP) is used to synchronize computer clocks on a TCP/IP network. You can configure the SNTP settings using Web Based Management.

**SSID**

Each wireless network has its own unique network name and it is technically referred to as a Service Set Identifier (SSID). The SSID is a 32-byte or less value and is assigned to the access point. The wireless network devices you want to associate to the wireless network should match the access point. The access point and wireless network devices regularly send wireless packets (referred to as beacons), which contain the SSID information. When your wireless network device receives a beacon, you can identify the wireless network that is close enough for the radio waves to reach your device.

**Status Monitor**

The Status Monitor utility is a configurable utility for Macintosh users to monitor the status of one or more devices, allowing you to get immediate notification when there is a problem, for example, when the machine runs out of paper or jams.

**Subnet Mask**

A subnet mask allows you to identify which part of an IP address is used as the network address and which part is used as the host address.

In the following example, the last segment of the IP address is known as the host address and the first three segments are the network address.

Example: Computer 1 can talk to Computer 2

- Computer 1

IP Address: 192.168.1.2  
Subnet Mask: 255.255.255.0

- Computer 2  
IP Address: 192.168.1.3  
Subnet Mask: 255.255.255.0

**NOTE:** 0 denotes that there is no limit to communication at this part of the address.

## T

### TCP/IP

Transmission Control Protocol/Internet Protocol (TCP/IP) is the most popular set of protocols used for communication, such as Internet and email. This protocol can be used in almost all operating systems, including Windows®, Windows Server®, OS X and Linux®.

### TKIP

Temporal Key Integrity Protocol (TKIP) is one of the encryption methods adopted by WPA™ to be used in a wireless network. TKIP provides per-packet key mixing, a message integrity check and rekeying mechanism.

## V

### Vertical Pairing

Vertical Pairing is a technology for Windows® that allows your Vertical Pairing-supported wireless machine to connect to your Infrastructure network using the PIN Method of Wi-Fi Protected Setup™ and the Web Services feature. It also enables printer driver installation from the printer icon in the **Add a device** screen.

## W

### Web Based Management

A standard Web Browser can be used to manage your machine using the Hyper Text Transfer Protocol (HTTP). You can perform the function listed or get the following information from a machine on your network using a web browser:

- Machine status information
- Change network settings, such as TCP/IP information
- Configure Store Print Log to Network
- Software version information of the machine and print server
- Change network and machine configuration details

**NOTE:** To use Web Based Management, you must use the TCP/IP protocol on your network and have a valid IP address programmed into the print server and your computer.

### Web Services

The Web Services protocol enables Windows Vista®, Windows®7, or Windows®8 users to install the drivers used for printing by right-clicking on the machine icon in the **Network** folder. Web Services also lets you check the current status of the machine from your computer.

### WEP

Wired Equivalent Privacy (WEP) is one of the encryption methods used in a wireless network. When using WEP,

the data is transmitted and received with a secure key.

**Wi-Fi Direct**

Wi-Fi Direct is one of the wireless configuration methods developed by the Wi-Fi Alliance®.

**WINS**

Windows® Internet Name Service (WINS) is an information-providing service for NetBIOS name resolution. It consolidates an IP address and a NetBIOS name that is in the local network.

**WINS Server**

Windows® Internet Name Service (WINS) Server maps IP addresses to computer names (NetBIOS names) in a Windows® network.

**WLAN Report**

The WLAN Report prints your machine's wireless status report. If the wireless connection fails, check the error code on the printed report.

**WPA-PSK/WPA2-PSK Authentication Method**

WPA-PSK/WPA2-PSK authentication method enables a Wi-Fi Protected Access® Pre-shared key (WPA-PSK/WPA2-PSK), which enables the Dell wireless machine to associate with access points using TKIP for WPA-PSK or AES for WPA-PSK and WPA2-PSK (WPA-Personal).

**WPS**

Wi-Fi Protected Setup™ (WPS) is a standard that allows setup of secured wireless network. WPS was created by the Wi-Fi Alliance® in 2007.

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