



# User's Guide

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Dell B1163/B1163w

## BASIC

This guide provides information concerning installation, basic operation and troubleshooting on windows.

## ADVANCED

This guide provides information about installation, advanced configuration, operation and troubleshooting on various OS environments.

Some features may not be available depending on models or countries.

# BASIC



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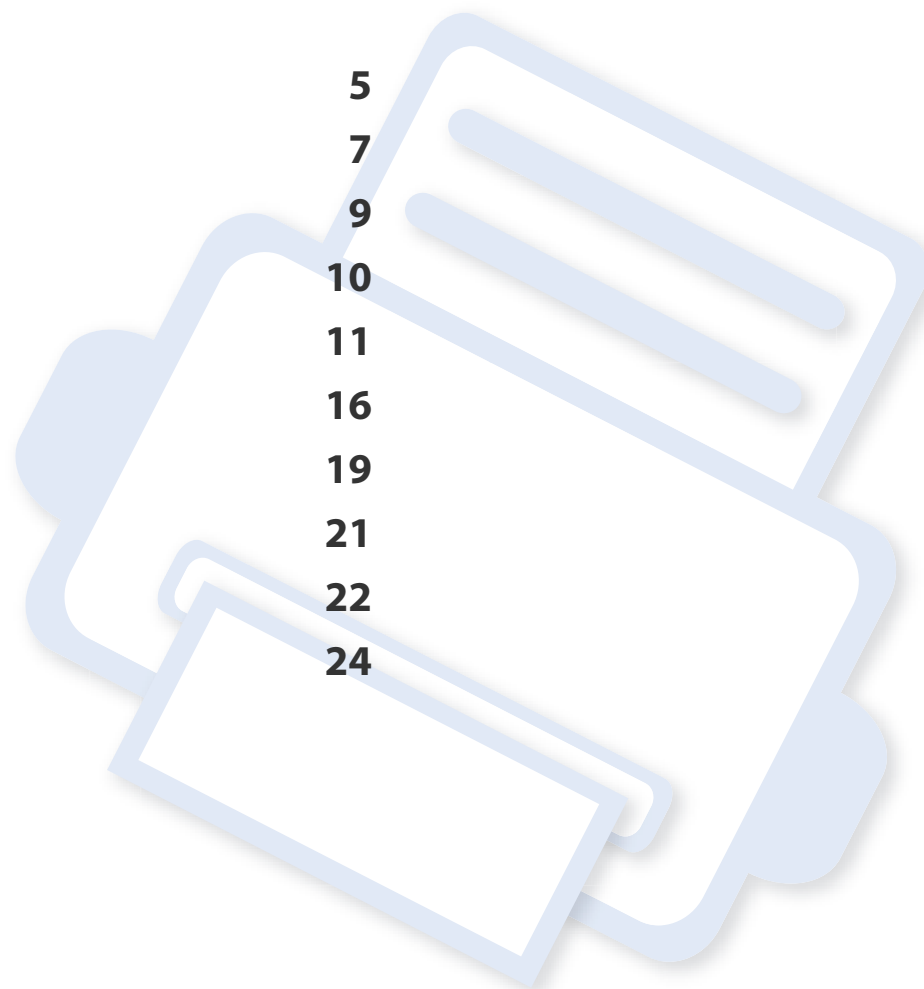
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# 1. Introduction

This chapter provides information you need to know before using the machine.

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# Key benefits

## Environmentally friendly



- To save toner and paper, this machine supports Eco feature (see "Eco printing" on page 39).
- To save paper, you can print multiple pages on one single sheet of paper (see "Using advanced print features" on page 136).
- To save paper, you can print on both sides of the paper (double-sided printing) (Manual) (see "Using advanced print features" on page 136).
- To save electricity, this machine automatically conserves electricity by substantially reducing power consumption when not in use.
- We recommend using recycled paper for saving energy.

## Fast high resolution printing



- You can print with a resolution of up to 1,200 x 1,200 dpi effective output.
- Fast, on-demand printing.
  - For single-side printing, 20 ppm (A4) or 21 ppm (Letter).

## Convenience



- Dell Printer Manager and Printing Status is a program that monitors and informs you of the machine's status and allows you to customize the machine's settings (see "Using Dell Printer Status" on page 163).
- Dell Scan Assistant is an application to help users scan, compile, and save documents in multiple formats, including .epub format. These documents can be shared via social networking sites.
- You can access Dell Support at [www.dell.com](http://www.dell.com) or [www.dell.com/support](http://www.dell.com/support). Select your region on the WELCOME TO DELL SUPPORT page, and fill in the requested details to access help tools and information.

## Wide range of functionality and application support



- Supports various paper sizes (see "Print media specifications" on page 73).
- Print watermark: You can customize your documents with words, such as "Confidential" (see "Using advanced print features" on page 136).

# Key benefits

- Print posters: The text and pictures of each page of your document are magnified and printed across the multiple sheets of paper and can then be taped together to form a poster (see "Using advanced print features" on page 136).
- You can print in various operating systems (see "System requirements" on page 76).

## AirPrint



- AirPrint allows you to wirelessly print directly from iPhone, iPad and iPod touch running iOS 4.2 or later.

## Supports various wireless network setting method



- Using the WPS (Wi-Fi Protected Setup™) button
  - You can easily connect to a wireless network using the WPS button on the machine and the access point (a wireless router).
- Using the USB cable
  - You can connect and set various wireless network settings using a USB cable.

- Using the Wi-Fi Direct
  - You can conveniently print from your mobile device using the Wi-Fi or Wi-Fi Direct feature.



See "Introducing wireless set up methods" on page 109.

# Features by models

Some features and optional goods may not be available depending on model or country.

## Operating System

Operating System	B1163	B1163w
Windows	●	●
Mac	●	●
Linux	●	●

(●: Included, Blank: Not available)

## Software

Software		B1163	B1163w
SPL printer driver		●	●
XPS printer driver		●	●
Dell Printer Manager	Scan to PC settings	●	●
	Device Settings	●	●
Dell Scan Assistant		●	●
Dell Printer Status		●	●

(●: Included, Blank: Not available)

# Features by models

## Variety feature

Features		B1163	B1163w
Hi-Speed USB 2.0		●	●
Network Interface 802.11b/g/n wireless LAN <sup>a</sup>			●
Eco printing (Control panel)		●	●
Duplex (2-sided) printing (Manual) <sup>b</sup>		●	●
Scan	Scan to PC	●	●
	PaperPort 14 (found in CD2) (excluding China)	●	●
Copy (see "Basic copying" on page 41)	ID card copying	●	●
	Reduced or enlarged copying	●	●
	Adjust background	●	●

a. Depending on your country, wireless LAN card may not be available. For some counties, only 802.11 b/g can be applied. Contact your local Dell dealer or the retailer where you bought your machine.

b. Windows only.

(●: Included, Blank: Not available)

# Useful to know



## The machine does not print.

- Open the print queue list and remove the document from the list (see "Canceling a print job" on page 37).
- Remove the driver and install it again (see "Installing the driver locally" on page 22).
- Select your machine as your default machine in your Windows (see "Setting your machine as a default machine" on page 135).



## Where can I purchase accessories or supplies?

- Inquire at a Dell distributor or your retailer.
- Visit [www.dell.com/supplies](http://www.dell.com/supplies). Select your country/region to view product service information.



## The status LED flashes or remains constantly on.

- Turn the product off and on again.
- Check the meanings of LED indications in this manual and troubleshoot accordingly (see "Understanding the status LED" on page 68).



## A paper jam has occurred.

- Open and close the scan unit (see "Front view" on page 17).
- Check the instructions on removing jammed paper in this manual and troubleshoot accordingly (see "Clearing paper jams" on page 64).



## Printouts are blurry.

- The toner level might be low or uneven. Shake the toner cartridge (see "Redistributing toner" on page 51).
- Try a different print resolution setting (see "Opening printing preferences" on page 37).
- Replace the toner cartridge (see "Replacing the toner cartridge" on page 53).



## Where can I download the machine's driver?

- You can get help, support application, machine drivers, manuals, and order information from the Dell website, [www.dell.com](http://www.dell.com) > find your product > Support or Downloads.

# About this user's guide

This user's guide provides information for your basic understanding of the machine as well as detailed steps to explain machine usage.



- Read the safety information before using the machine.
- If you have a problem using the machine, refer to the troubleshooting chapter.
- Terms used in this user's guide are explained in the glossary chapter.
- All illustrations in this user's guide may differ from your machine depending on its options or model you purchased.
- The screenshots in this administrator's guide may differ from your machine depending on the machine's firmware/driver version.
- The procedures in this user's guide are mainly based on Windows 7.

## Conventions

Some terms in this guide are used interchangeably, as below:

- Document is synonymous with original.
- Paper is synonymous with media, or print media.
- Machine refers to printer or MFP.

## General icons




Icon	Text	Description
	<b>Caution</b>	Gives users information to protect the machine from possible mechanical damage or malfunction.
	<b>Note</b>	Provides additional information or detailed specification of the machine function and feature.

# Safety information

These warnings and precautions are included to prevent injury to you and others, and to prevent any potential damage to your machine. Be sure to read and understand all of these instructions before using the machine. After reading this section, keep it in a safe place for future reference.

## Important safety symbols

### Explanation of all icons and signs used in this chapter

	<b>Warning</b>	Hazards or unsafe practices that may result in severe personal injury or death.
	<b>Caution</b>	Hazards or unsafe practices that may result in minor personal injury or property damage.
		Do not attempt.

## Operating environment

### Warning



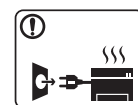
Do not use if the power cord is damaged or if the electrical outlet is not grounded.

This could result in electric shock or fire.



Do not place anything on top of the machine (water, small metal or heavy objects, candles, lit cigarettes, etc.).

This could result in electric shock or fire.



- If the machine gets overheated, it releases smoke, makes strange noises, or generates an odd odor. Immediately turn off the power switch and unplug the machine.

- The user should be able to access the power outlet in case of emergencies that might require the user to pull the plug out.

This could result in electric shock or fire.



Do not bend, or place heavy objects on the power cord.

Stepping on or allowing the power cord to be crushed by a heavy object could result in electric shock or fire.

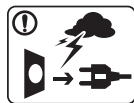







Do not remove the plug by pulling on the cord; do not handle the plug with wet hands.

This could result in electric shock or fire.







# Safety information

## Caution

	<p>During an electrical storm or for a period of non-operation, remove the power plug from the electrical outlet.</p> <p>This could result in electric shock or fire.</p>
	<p>Be careful, the paper output area is hot.</p> <p>Burns could occur.</p>
	<p>If the machine has been dropped, or if the cabinet appears damaged, unplug the machine from all interface connections and request assistance from qualified service personnel.</p> <p>Otherwise, this could result in electric shock or fire.</p>
	<p>If the machine does not operate properly after these instructions have been followed, unplug the machine from all interface connections and request assistance from qualified service personnel.</p> <p>Otherwise, this could result in electric shock or fire.</p>
	<p>If the plug does not easily enter the electrical outlet, do not attempt to force it in.</p> <p>Call an electrician to change the electrical outlet, or this could result in electric shock.</p>
	<p>Do not allow pets to chew on the AC power, telephone or PC interface cords.</p> <p>This could result in electric shock or fire and/or injury to your pet.</p>




## Operating method

### Caution

	<p>Do not forcefully pull the paper out during printing.</p> <p>It can cause damage to the machine.</p>
	<p>Be careful not to put your hand between the machine and paper tray.</p> <p>You may get injured.</p>
	<p>Be care when replacing paper or removing jammed paper.</p> <p>New paper has sharp edges and can cause painful cuts.</p>
	<p>When printing large quantities, the bottom part of the paper output area may get hot. Do not allow children to touch.</p> <p>Burns can occur.</p>
	<p>When removing jammed paper, do not use tweezers or sharp metal objects.</p> <p>It can damage the machine.</p>
	<p>Do not allow too many papers to stack up in the paper output tray.</p> <p>It can damage the machine.</p>

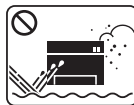


# Safety information


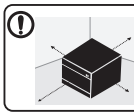


	Do not block or push objects into the ventilation opening. This could result in elevated component temperatures which can cause damage or fire.
	Use of controls or adjustments or performance of procedures other than those specified herein may result in hazardous radiation exposure.
	This machine's power reception device is the power cord. To switch off the power supply, remove the power cord from the electrical outlet.

## Installation / Moving







### Warning

	Do not place the machine in an area with dust, humidity, or water leaks. This could result in electric shock or fire.
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### Caution

	Before moving the machine, turn the power off and disconnect all cords. The information below are only suggestions based on the units weight. If you have a medical condition that prevents you from lifting, do not lift the machine. Ask for help, and always use the appropriate amount of people to lift the device safety. Then lift the machine: <ul style="list-style-type: none"><li>• If the machine weighs under 20 kg (44.09 lbs), lift with 1 person.</li><li>• If the machine weighs 20 kg (44.09 lbs) - 40kg (88.18 lbs), lift with 2 people.</li><li>• If the machine weighs more than 40 kg (88.18 lbs), lift with 4 or more people.</li></ul> The machine could fall, causing injury or machine damage.
	Choose a flat surface with enough space for ventilation to place the machine. Also consider the space required to open the cover and trays. The place should be well-ventilated and be far from direct light, heat, and humidity.
	When using the machine for a long period of time or printing a large number of pages in a non-ventilated space, it could pollute the air and be harmful to your health. Place the machine in a well-ventilated space or open a window to circulate the air periodically.
	Do not place the machine on an unstable surface. The machine could fall, causing injury or machine damage.




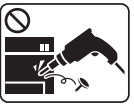

# Safety information

	Use only No.26 AWG <sup>a</sup> or larger, telephone line cord, if necessary. Otherwise, it can cause damage to the machine.
	Make sure you plug the power cord into a grounded electrical outlet. Otherwise, this could result in electric shock or fire.
	Use the power cord supplied with your machine for safe operation. If you are using a cord which is longer than 2 meters (6 feet) with a 110V machine, then the gauge should be 16 AWG or larger. Otherwise, it can cause damage to the machine, and could result in electric shock or fire.
	Do not put a cover over the machine or place it in an airtight location, such as a closet. If the machine is not well-ventilated, this could result in fire.
	Do not overload wall outlets and extension cords. This can diminish performance, and could result in electric shock or fire.
	The machine should be connected to the power level which is specified on the label. If you are unsure and want to check the power level you are using, contact the electrical utility company.



a. AWG: American Wire Gauge

## Maintenance / Checking

### Caution



	Unplug this product from the wall outlet before cleaning the inside of the machine. Do not clean the machine with benzene, paint thinner or alcohol; do not spray water directly into the machine. This could result in electric shock or fire.
	When you are working inside the machine replacing supplies or cleaning the inside, do not operate the machine. You could get injured.
	Keep cleaning supplies away from children. Children could get hurt.
	Do not disassemble, repair or rebuild the machine by yourself. It can damage the machine. Call a certified technician when the machine needs repairing.
	To clean and operate the machine, strictly follow the user's guide provided with the machine. Otherwise, you could damage the machine.






# Safety information

	<p>Keep the power cable and the contact surface of the plug clean from dust or water.</p> <p>Otherwise, this could result in electric shock or fire.</p>
	<ul style="list-style-type: none"><li>• Do not remove any covers or guards that are fastened with screws.</li><li>• Fuser units should only be repaired by a certified service technician. Repair by non-certified technicians could result in fire or electric shock.</li><li>• The machine should only be repaired by a Dell service technician.</li></ul>

## Supply usage

### Caution

	<p>Do not disassemble the toner cartridge.</p> <p>Toner dust can be dangerous if inhaled or ingested.</p>
	<p>Do not burn any of the supplies such as toner cartridge or fuser unit.</p> <p>This could cause an explosion or uncontrollable fire.</p>

	<p>When storing supplies such as toner cartridges, keep them away from children.</p> <p>Toner dust can be dangerous if inhaled or ingested.</p>
	<p>Using recycled supplies, such as toner, can cause damage to the machine.</p> <p>In case of damage due to the use of recycled supplies, a service fee will be charged.</p>
	<p>For supplies that contain toner dust (toner cartridge, waste toner bottle, imaging unit, etc.) follow the instructions below.</p> <ul style="list-style-type: none"><li>• When disposing of the supplies, follow the instructions for disposal. Refer to the reseller for disposal instructions.</li><li>• Do not wash the supplies.</li><li>• Do not reuse the waste toner bottle.</li></ul> <p>If you do not follow the instructions above, it may cause machine malfunction and environmental pollution. The warranty does not cover damages caused by a user's carelessness.</p>
	<p>When toner gets on your clothing, do not use hot water to wash it.</p> <p>Hot water sets toner into fabric. Use cold water.</p>
	<p>When changing the toner cartridge or removing jammed paper, be careful not to let toner dust touch your body or clothes.</p> <p>Toner dust can be dangerous if inhaled or ingested.</p>

# Machine overview

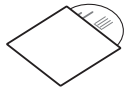
## Accessories



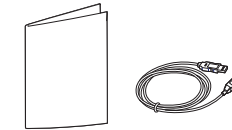
Power cord



Quick installation guide



Software CD<sup>a</sup>



Misc. accessories<sup>b</sup>

a. The software CD contains the print drivers, user's guide, and software applications.

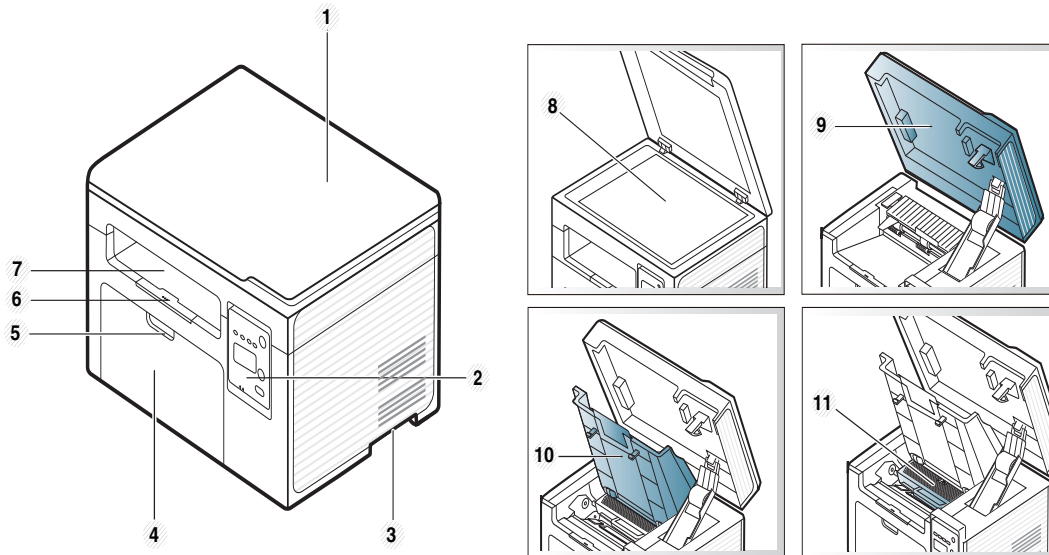
b. Miscellaneous accessories included with your machine may vary by country of purchase and specific model.

# Machine overview

## Front view



- This illustration may differ from your machine depending on your model. There are various types of machine.
- Some features and optional goods may not be available depending on model or country (see "Features by models" on page 7).



4	Tray	10	Inner cover
5	Tray handle	11	Toner cartridge
6	Output support		

- Close the scanner lid before opening the scan unit.
- Be careful not to pinch your fingers.

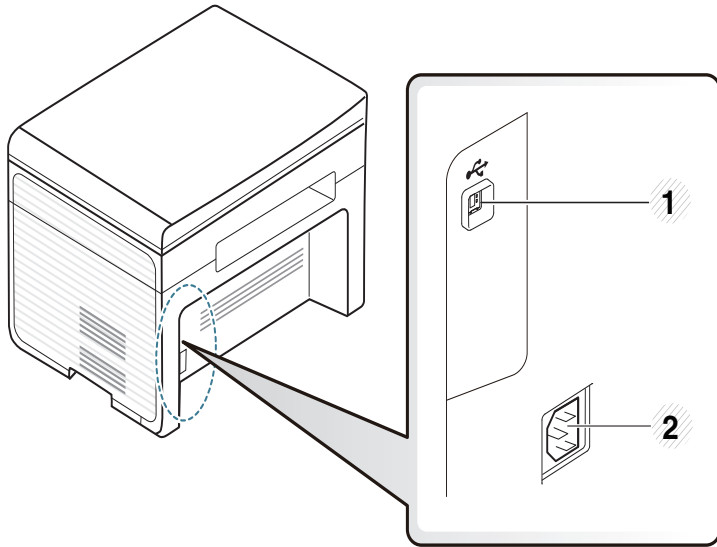
1	Scanner lid	7	Output tray
2	Control panel	8	Scanner glass
3	Handle	9	Scan unit <sup>a b</sup>

# Machine overview

## Rear view



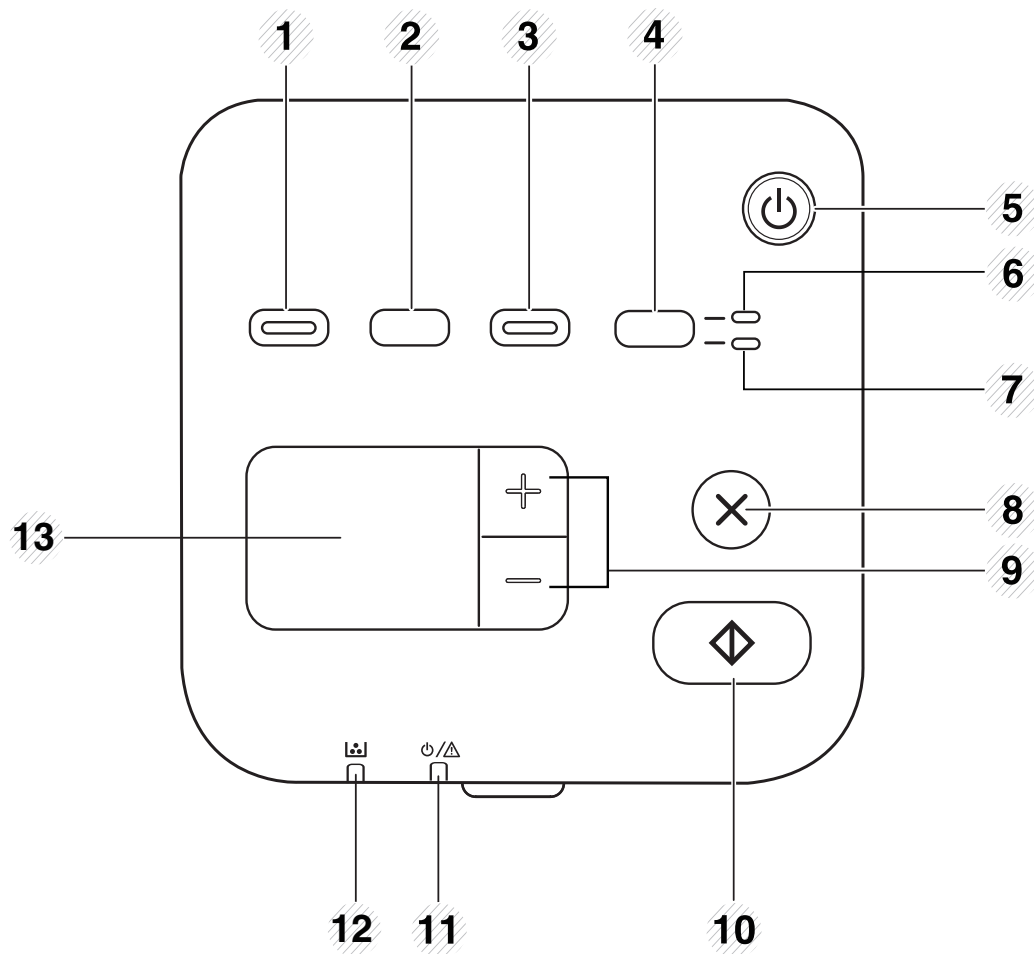
- This illustration may differ from your machine depending on your model. There are various types of machine.
- Some features and optional goods may not be available depending on model or country (see "Features by models" on page 7).






1 USB 2.0 port

2 Power receptacle



# Control panel overview



2	<b>Power Saver<sup>a</sup></b>		Switches to Power save mode.
	<b>WPS<sup>b</sup></b>		Configures the wireless network connection easily without a computer (see "Using the WPS button" on page 110).
3	<b>Scan to</b>		Sends scanned data (see "Basic Scanning" on page 43).
4	<b>ID Copy</b>		Allows you to copy both sides of an ID card like a driver's license on a single side of paper (see "ID card copying" on page 41).
5	<b>Power</b>		Turns the power on or off, or wakes up the machine from the power save mode. If you need to turn the machine off, press this button for more than three seconds.
6	<b>Front LED</b>		When the LED lights on, place the front side of an ID card facing down on the scanner glass (see "ID card copying" on page 41).
7	<b>Back LED</b>		When the LED lights on, place the back side of an ID card facing down on the scanner glass (see "ID card copying" on page 41).

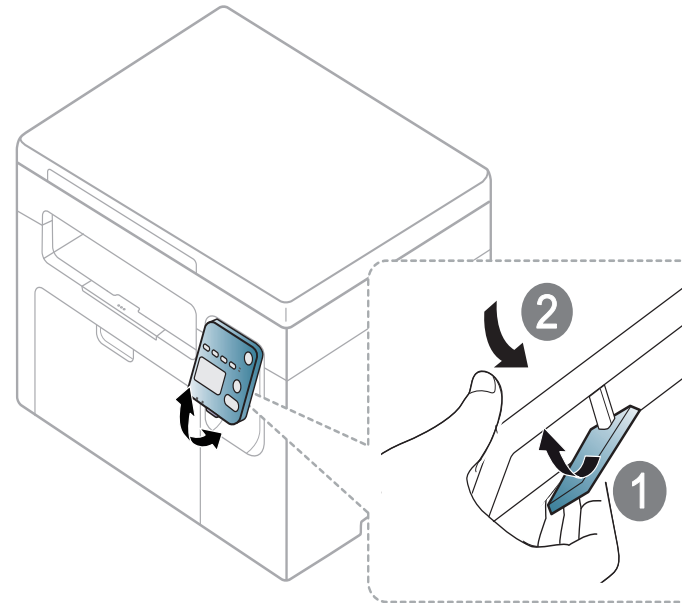
1	<b>Eco</b>	Turn into eco mode to reduce toner consumption and paper usage when pc-printing only (see "Eco printing" on page 39).
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# Control panel overview

8	<b>Stop/ Clear</b>		<p>Stops an operation at any time and there are more functions.</p> <ul style="list-style-type: none"> <li>• <b>Cancels the current job.</b></li> <li>• <b>Prints configuration report:</b> Press and hold this button for about 2 seconds until the status LED blinks slowly, and release.</li> <li>• <b>Supplied Information report:</b> Press and hold this button for about 6 seconds and release.</li> <li>• Network configuration report<sup>b</sup>: Press and hold this button for about 4 seconds until the status LED blinks fast, and release.</li> </ul>
9	<b>+/- Buttons</b>		<p>Allows you to increase/decrease the number of pages to copy. You can determine the number of copies (up to 99 copies) to copy by pressing the +/- buttons. The default value is 1.</p> <ul style="list-style-type: none"> <li>• If you press the +/- buttons, the number of copies will increase/decrease by one.</li> <li>• If you press and hold the +/- buttons, the number of copies will increase/decrease by ten.</li> </ul>
10	<b>Start</b>		Starts a job.
11	<b>Status LED</b>		Indicates the status of your machine (see "Understanding the status LED" on page 68).
12	<b>Toner LED</b>		Shows the status of the toner (see "Understanding the status LED" on page 68).
13	<b>Display screen</b>		Shows the number of pages you want to copy.

- a. B1163 only.
- b. B1163w only.

## Adjusting the control panel

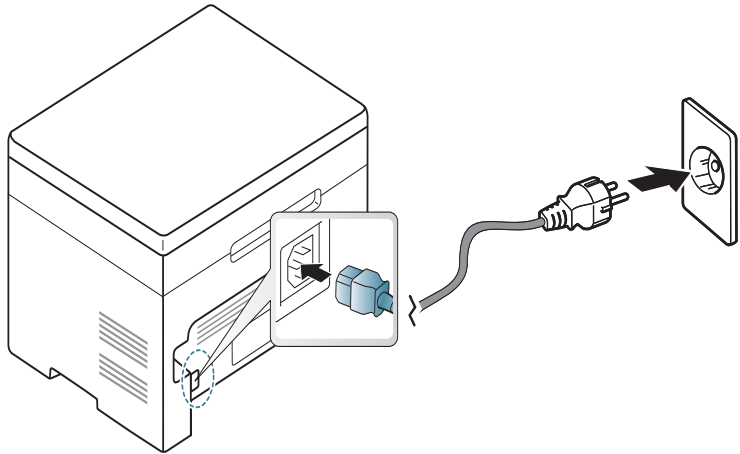


Illustrations on this user's guide may differ from your machine depending on its options or models. Check your machine type (see "Front view" on page 17).




# Turning the machine ON


- 1 Connect the machine to the electricity supply first.  
Turn the switch on if the machine has a power switch.



Illustrations on this user's guide may differ from your machine depending on its options or models. Check your machine type (see "Front view" on page 17).

- 2 Press  (**Power**) button on the control panel.



If you want to turn the power off, press and hold  (**Power**) button for about 3 seconds.

# Installing the driver locally

A locally connected machine is a machine directly attached to your computer using the cable.



- If you are a Mac or Linux operating systems user, refer to the "Installation for Mac" on page 97 or "Installation for Linux" on page 99.
- The installation window in this User's Guide may differ depending on the machine and interface in use.
- Only use a USB cable no longer than 3 meters (118 inches).

## Windows

- 1 Make sure that the machine is connected to your computer and powered on.



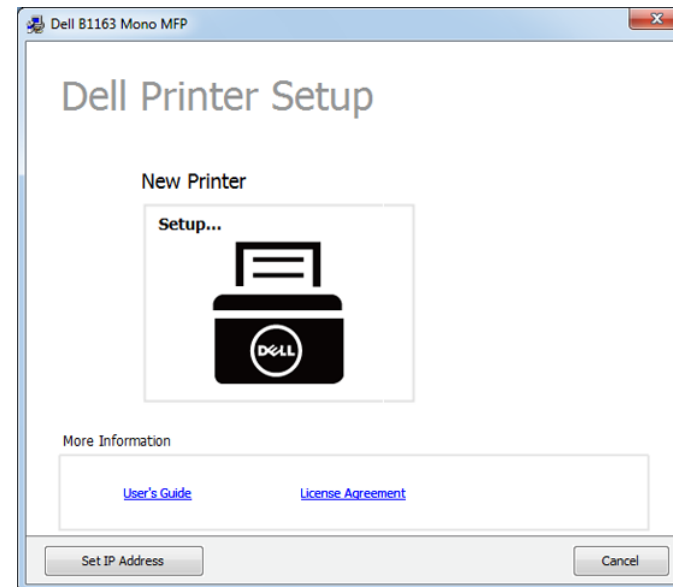
If the "**Found New Hardware Wizard**" appears during the installation procedure, click **Cancel** to close the window.

- 2 Insert the supplied software CD into your CD/DVD drive.  
The software CD should automatically run and an installation window will appear.  
If the installation window does not appear, click **Start > All programs > Accessories > Run**.

X:\Setup.exe replacing "X" with the letter, which represents your CD/DVD drive and click **OK**.

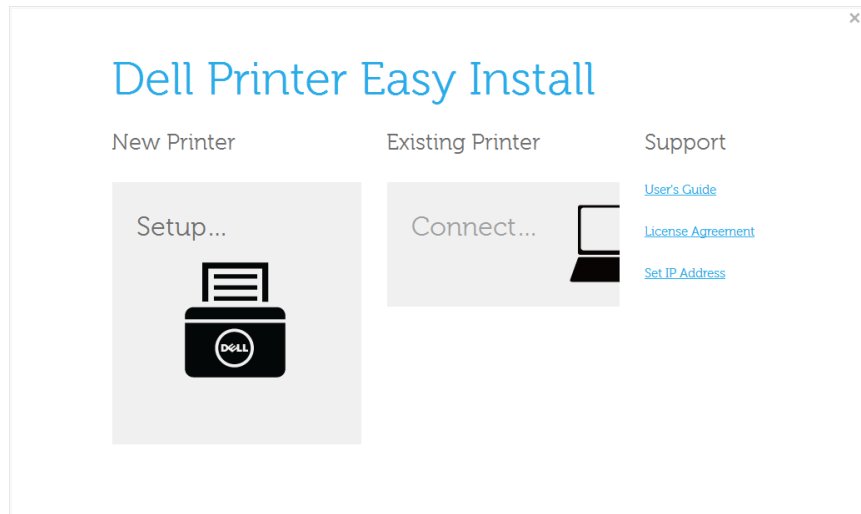
- For Windows 8,  
If the installation window does not appear, from **Charms**, select **Search > Apps** and search for **Run**. Type in X:\Setup.exe, replacing "X" with the letter that represents your CD/DVD drive and click **OK**.  
If "**Tap to choose what happens with this disc.**" pop-up window appears, click the window and select **Run Setup.exe**.

- 3 Click **New Printer**.  
(B1163)

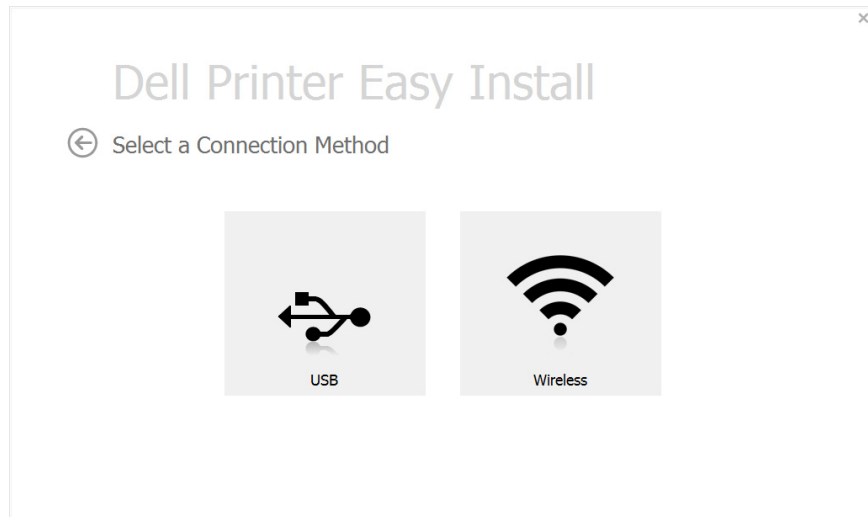


# Installing the driver locally

(B1163w)



4 Choose **USB**. (B1163w only)



5 Follow the instructions on the installation window.

## From the Windows 8 Start Screen



- If you install the driver using the supplied software CD, V4 driver is not installed. If you want to use the V4 driver in the **Desktop** screen, you can download from the Dell website ([www.dell.com/support](http://www.dell.com/support)).
- If you want to install Dell's printer management tools, you need to install them using the supplied software CD.

- 1 Make sure that your computer is connected to the Internet and powered on.
- 2 Make sure that the machine is powered on.
- 3 Connect the computer and the machine with a USB cable.  
The driver is automatically installed from the **Windows Update**.

# Reinstalling the driver

If the printer driver does not work properly, follow the steps below to reinstall the driver.

## Windows

- 1 From the **Start** menu, select **Programs** or **All Programs > Dell Printers > your printer driver name > Uninstall**.
  - For Windows 8,
    - 1 From Charms, select **Search > Apps**.
    - 2 Search and click **Control Panel**.
    - 3 Click **Programs and Features**.
    - 4 Right-click the driver you want to uninstall and select **Uninstall**.
- 2 Follow the instructions in the installation window.
- 3 Insert the software CD into your CD/DVD drive and install the driver again (see "Installing the driver locally" on page 22).

## From the Windows 8 Start Screen

- 1 Make sure that the machine is connected to your computer and powered on.
- 2 Click on the **Uninstall Dell Printer Software** tile in the **Start** screen.
- 3 Follow the instructions in the window.



- If you cannot find a Dell Printer Software tile, uninstall from the desktop screen mode.
- If you want to uninstall Dell's printer management tools, from the **Start** screen, right-click the app > **Uninstall** > right-click the program you want to delete > **Uninstall** and follow the instruction in the window.



## 2. Basic Setup

This chapter provides information about the the basic setup options.

- **Media and tray**
- **Basic printing**
- **Basic copying**
- **Basic scanning**

26

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43



# Media and tray

This chapter provides information on how to load print media into your machine.



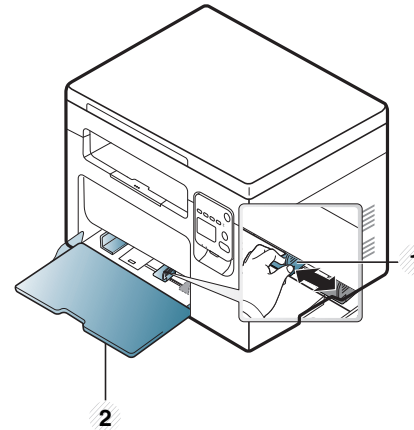
- Using print media that does not meet these specifications may cause problems or require repairs. Such repairs are not covered by Dell's warranty or service agreements.
- Make sure not to use the inkjet photo paper with this machine. It could cause damage to the machine.
- Using inflammable print media can cause a fire.
- Use designated print media (see "Print media specifications" on page 73).



The use of inflammable media or foreign materials left in the printer may lead to overheating of the unit and, in rare cases may cause a fire.

## Tray overview

To change the size, you need to adjust the paper guides.



- 1 Paper width guide
- 2 Tray



Illustrations on this user's guide may differ from your machine depending on its options or models. Check your machine type (see "Front view" on page 17).



If you do not adjust the guide, it may cause paper registration, image skew, or jamming of the paper.

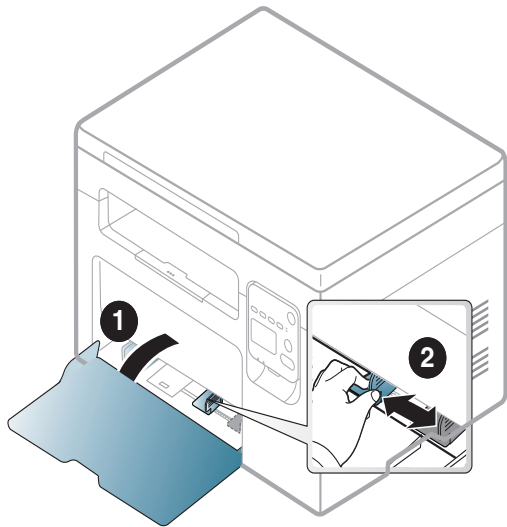
# Media and tray

## Loading paper in the tray

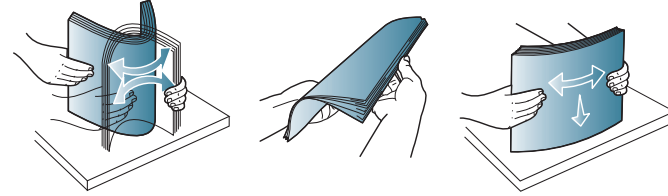


Illustrations on this user's guide may differ from your machine depending on its options or models. Check your machine type (see "Front view" on page 17).

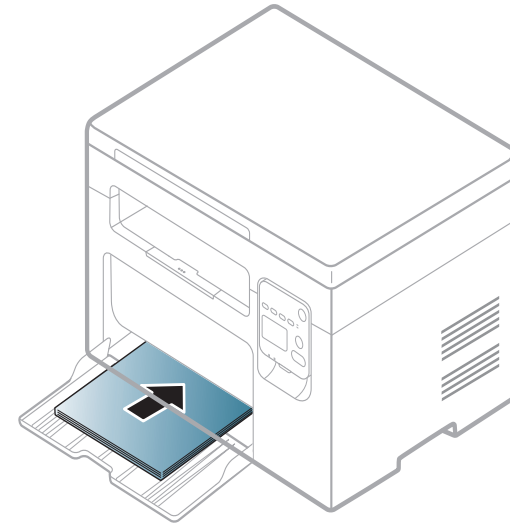
- 1 Open the tray and then adjust the tray size to the media size you are loading (see "Tray overview" on page 26).



- 2 Flex or fan the edge of the paper stack to separate the pages before loading papers.



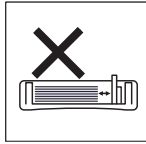
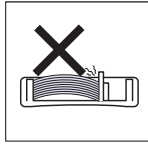
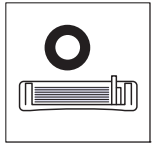
- 3 Place the paper with the side you want to print facing up.



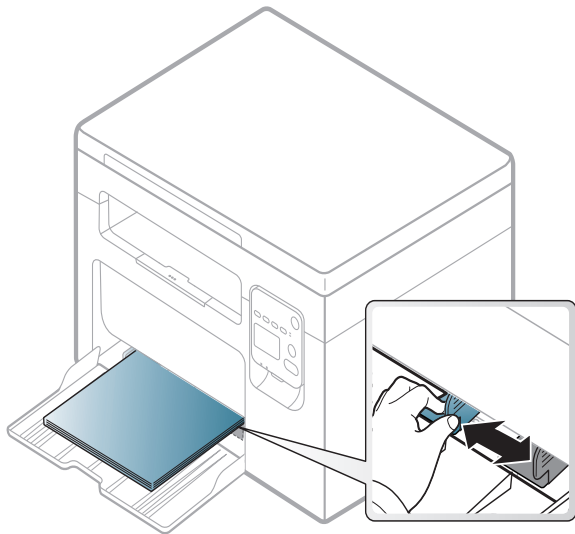
# Media and tray



- Do not push the paper width guide too far causing the media to warp.
- Do not use a paper with a leading-edge curl, it may cause a paper jam or the paper can be wrinkled.
- If you do not adjust the paper width guide, it may cause paper jams.



- 4 Squeeze the paper width guide and slide it to the edge of the paper stack without causing it to bend.



- 5 When you print a document, set the paper type and size for the tray.



The settings made from the machine driver override the settings on the control panel.

- a To print in application, open an application and start the print menu.
- b Open **Printing Preferences** (see "Opening printing preferences" on page 37).
- c Press the **Paper** tab in **Printing Preferences**, and select an appropriate paper type.  
For example, if you want to use a label, set the paper type to **Label**.
- d Select **Auto Select** (or **Manual Feeder**) in paper source, then press **OK**.
- e Start printing in application.



# Media and tray

## Manual feeding in the tray

The tray can hold special sizes and types of print material, such as postcards, note cards, and envelopes (see "Print media specifications" on page 73).

To manually feed paper in the tray, see "Loading paper in the tray" on page 27



### Tips on using the manual feeding in tray

- If you select **Paper > Source > Manual Feeder** from your printer driver, you need to press **OK** each time you print a page.
- Load only one type, size and weight of print media at a time in the tray.
- To prevent paper jams, do not add paper while printing when there is still paper in the tray.
- Print media should be loaded face up with the top edge going into the tray first and be placed in the center of the tray.
- To ensure printing quality and to prevent paper jams, only load the available paper (see "Print media specifications" on page 73).
- Flatten any curl on postcards, envelopes, and labels before loading them into the in the tray.
- When printing on special media, you must follow the loading guidelines (see "Printing on special media" on page 29).

## Printing on special media

The table below shows the special media usable in tray.

The media is also shown in the **Printing Preferences**. To get the highest printing quality, select the proper media type from the **Printing preferences** window > **Paper** tab > **Paper Type** (see "Opening printing preferences" on page 37).

For example, if you want to print on labels, select **Labels** for **Paper Type**.



- When using special media, we recommend you feed one sheet at a time (see "Print media specifications" on page 73).
- Illustrations on this user's guide may differ from your machine depending on its options or models. Check your machine type (see "Front view" on page 17).

# Media and tray

To see for paper weights for each sheet, refer to "Print media specifications" on page 73.

Types	Tray <sup>a</sup>
Plain	●
Thick	●
Thin	●
Bond	●
Color	●
CardStock	●
Labels	●
Envelope	●
Preprinted	●
Cotton	●
Recycled	●
Archive	●

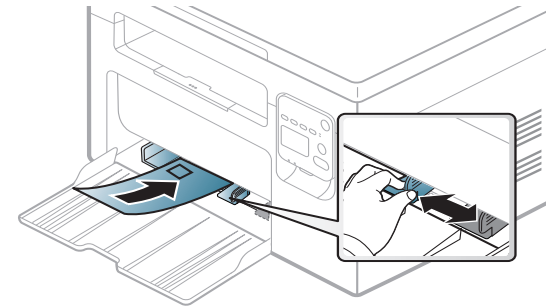
a. The available paper types for manual feeding in the tray.

(●: Supported, Blank: Not supported)

## Envelope

Printing successfully on envelopes depends upon the quality of the envelopes.

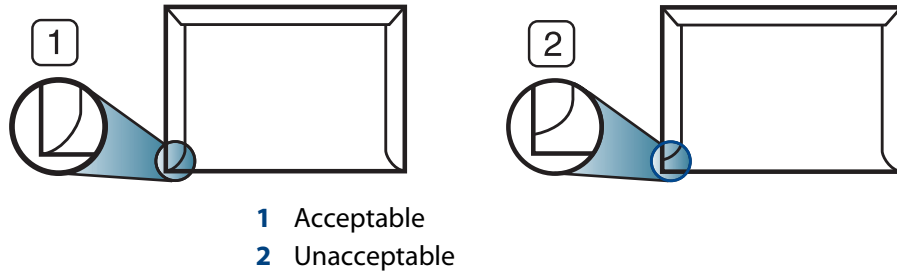
To print an envelope, place it as shown in the following figure.



- When selecting envelopes, consider the following factors:
  - **Weight:** should not exceed 90 g/m<sup>2</sup> otherwise; jams may occur.
  - **Construction:** should lie flat with less than 6 mm curl and should not contain air.
  - **Condition:** should not be wrinkled, nicked, nor damaged.
  - **Temperature:** should resist the heat and pressure of the machine during operation.
- Use only well-constructed envelopes with sharp and well-creased folds.
- Do not use stamped envelopes.
- Do not use envelopes with clasps, snaps, windows, coated lining, self-adhesive seals, or other synthetic materials.

# Media and tray

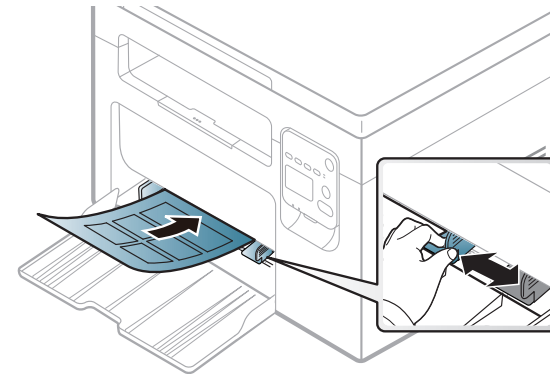
- Do not use damaged or poorly made envelopes.
- Be sure the seam at both ends of the envelope extends all the way to the corner of the envelope.



- Envelopes with a peel-off adhesive strip or with more than one flap that folds over to seal must use adhesives compatible with the machine's fusing temperature for 0.1 second about 170°C (338 °F). The extra flaps and strips might cause wrinkling, creasing, or jams, and may even damage the fuser.
- For the best print quality, position margins no closer than 15 mm from the edges of the envelope.
- Avoid printing over the area where the envelope's seams meet.

## Labels

To avoid damaging the machine, use only labels designed for use in laser printers.

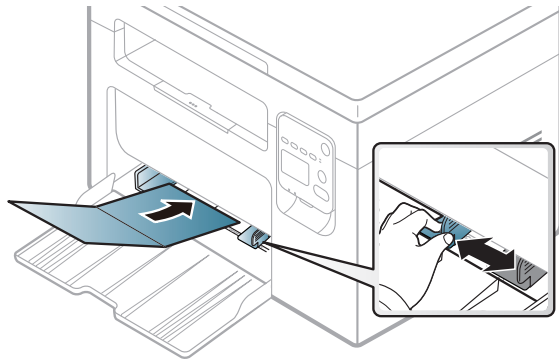


- When selecting labels, consider the following factors:
  - **Adhesives:** Should be stable at your machine's fusing temperature about 170°C (338°F).
  - **Arrangement:** Only use labels with no exposed backing between them. Labels can peel off sheets that have spaces between the labels, causing serious jams.
  - **Curl:** Must lie flat with no more than 13 mm of curl in any direction.
  - **Condition:** Do not use labels with wrinkles, bubbles, or other indications of separation.
- Make sure that there is no exposed adhesive material between labels. Exposed areas can cause labels to peel off during printing, which can cause paper jams. Exposed adhesive can also cause damage to machine components.

# Media and tray

- Do not run a sheet of labels through the machine more than once. The adhesive backing is designed for only a single pass through the machine.
- Do not use labels that are separating from the backing sheet or are wrinkled, bubbled, or otherwise damaged.

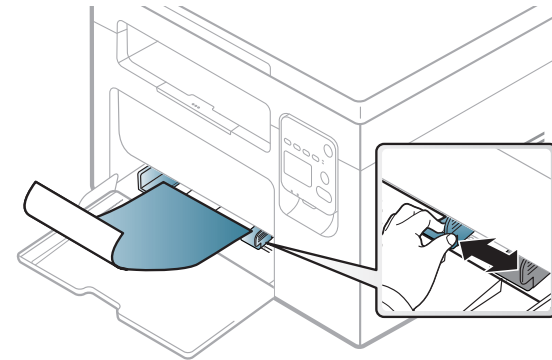
## Card stock/ Custom-sized paper



- In the software application, set the margins to at least 6.4 mm (0.25 inches) away from the edges of the material.

## Preprinted paper

When loading preprinted paper, the printed side should be facing up with an uncurled edge at the front. If you experience problems with paper feeding, turn the paper around. Note that print quality is not guaranteed.



- Must be printed with heat-resistant ink that will not melt, vaporize, or release hazardous emissions when subjected to the machine's fusing temperature for 0.1 second (about 170°C (338°F)).
- Preprinted paper ink must be non-flammable and should not adversely affect machine rollers.
- Before you load preprinted paper, verify that the ink on the paper is dry. During the fusing process, wet ink can come off preprinted paper, reducing print quality.

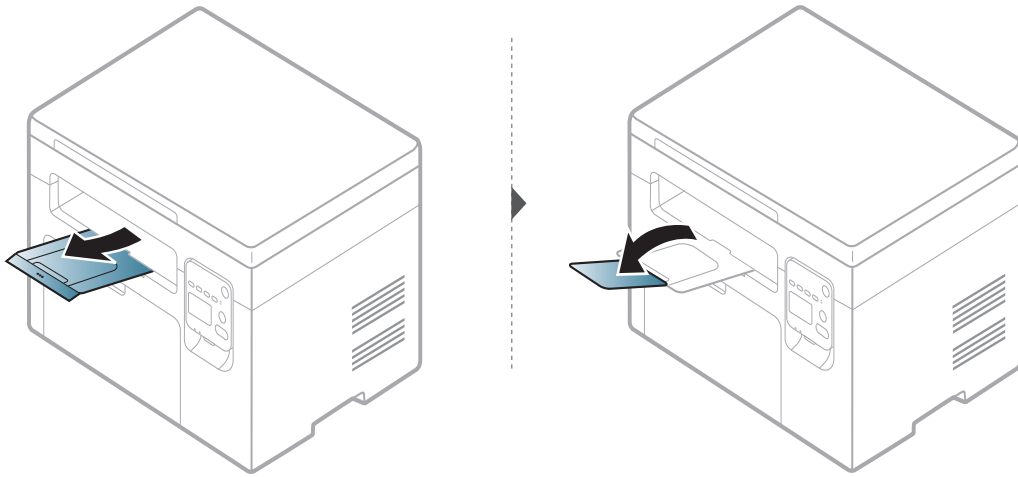
# Media and tray

## Using the output support



The surface of the output tray may become hot if you print a large number of pages at once. Make sure that you do not touch the surface, and do not allow children near it.

The printed pages stack on the output support, and the output support will help the printed pages to align. The printer sends output to the output tray by default.



Illustrations on this user's guide may differ from your machine depending on its options or models. Check your machine type (see "Front view" on page 17).

## Preparing originals

- Do not load paper smaller than 142 x 148 mm (5.6 x 5.8 inches) or larger than 216 x 356 mm (8.5 x 14 inches).
- Do not attempt to load the following paper in order to prevent paper jam, low print quality and machine damage.
  - Carbon-paper or carbon-backed paper
  - Coated paper
  - Onion skin or thin paper
  - Wrinkled or creased paper
  - Curled or rolled paper
  - Torn paper
- Remove all staples and paper clips before loading.
- Make sure any glue, ink, or correction fluid on the paper is completely dry before loading.
- Do not load originals that include different sizes or weights of paper.
- Do not load booklets, pamphlets, transparencies, or documents with other unusual characteristics.

# Media and tray

## Loading originals

You can use the scanner glass to load an original for copying and scanning.

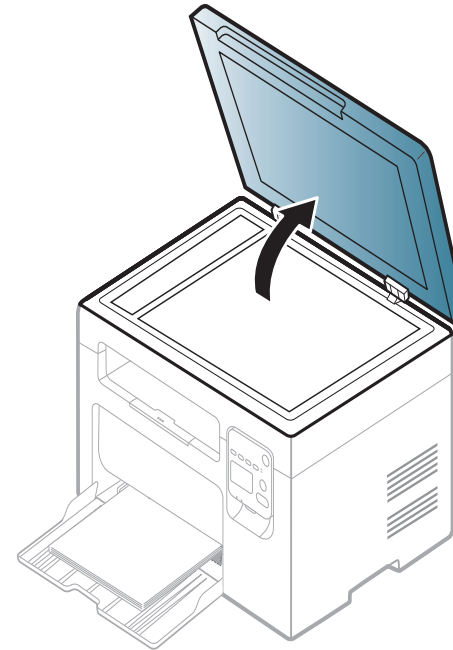


Illustrations on this user's guide may differ from your machine depending on its options or models. Check your machine type (see "Front view" on page 17).

## On the scanner glass

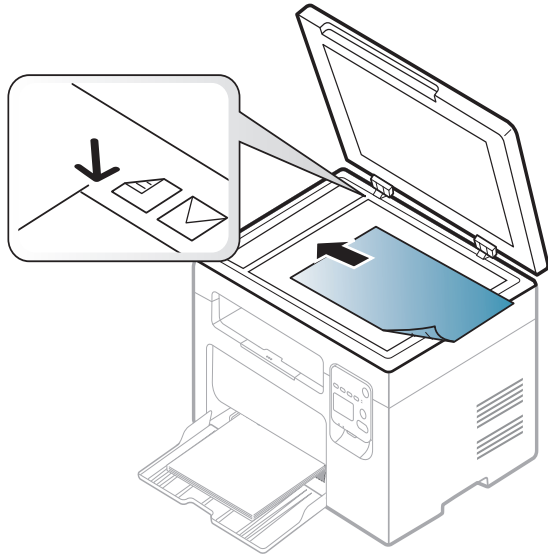
Using the scanner glass, you can copy or scan originals. You can get the best scan quality, especially for colored or gray-scaled images.

- 1 Lift and open the scanner lid.



# Media and tray

- 2 Place the original face down on the scanner glass. Align it with the registration guide at the top left corner of the glass.



- 3 Close the scanner lid.



- Leaving the scanner lid open while copying may affect copy quality and toner consumption.
- Dust on the scanner glass may cause black spots on the printout. Always keep it clean (see "Cleaning the machine" on page 55).
- If you are copying a page from a book or magazine, lift the scanner lid until its hinges are caught by the stopper and then close the lid. If the book or magazine is thicker than 30 mm, start copying with the scanner lid open.



- Be careful not to break the scanner glass. You may get hurt.
- Do not put hands while closing the scanner lid. The scanner lid may fall on your hands and get hurt.
- Do not look the light from inside of the scanner while copying or scanning. It is harmful to eyes.

# Basic printing



For special printing features, refer to the Advanced Guide (see "Using advanced print features" on page 136).

## Printing

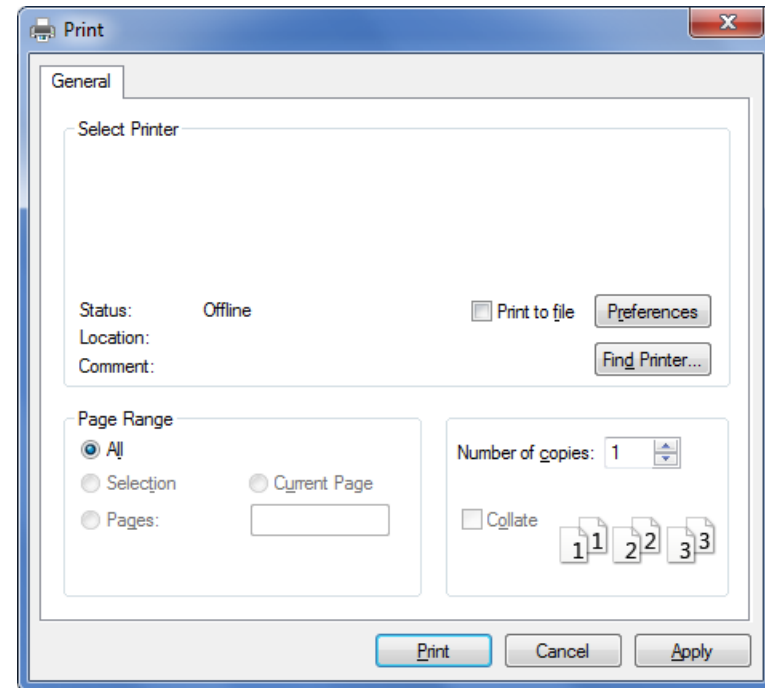


- If you are a Mac or Linux operating systems user, refer to the Advanced Guide (see "Mac printing" on page 144 or "Linux printing" on page 146).
- For Windows 8 user, see "Basic printing" on page 36.

The following **Printing Preferences** window is for Notepad in Windows 7.

- 1 Open the document you want to print.
- 2 Select **Print** from the **File** menu.

- 3 Select your machine from the **Find Printer** list.



- 4 The basic print settings including the number of copies and print range are selected within the **Print** window.



To take advantage of the advanced printing features, click **Properties** or **Preferences** from the **Print** window (see "Opening printing preferences" on page 37).



- 5 To start the print job, click **OK** or **Print** in the **Print** window.



# Basic printing





## Canceling a print job

If the print job is waiting in the print queue or print spooler, cancel the job as follows:

- You can access this window by simply double-clicking the machine icon (  ) in the Windows task bar.
- You can also cancel the current job by pressing  (**Stop/Clear**) on the control panel.

## Opening printing preferences

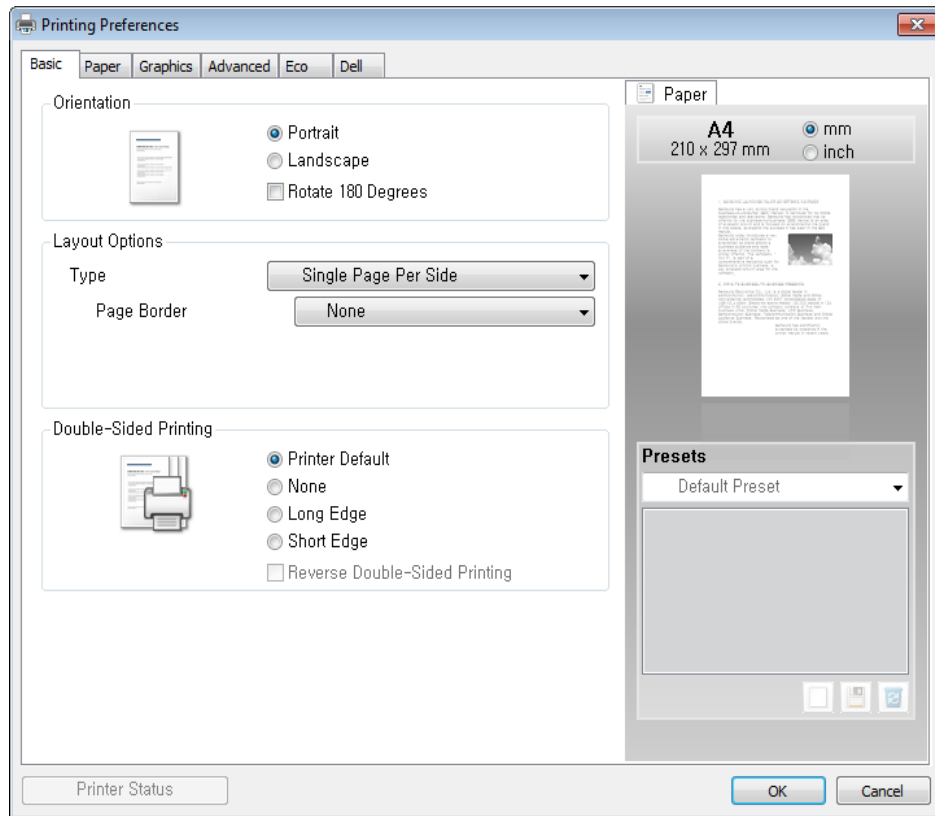


- The **Printing Preferences** window that appears in this user's guide may differ depending on the machine in use.
- When you select an option in **Printing Preferences**, you may see a warning mark  or . An  mark means you can select that certain option but it is not recommended, and an  mark means you cannot select that option due to the machine's setting or environment.

- 1 Open the document you want to print.
- 2 Select **Print** from the file menu. The **Print** window appears.
- 3 Select your machine from the **Find Printer**.

# Basic printing

## 4 Click **Properties** or **Preferences**.



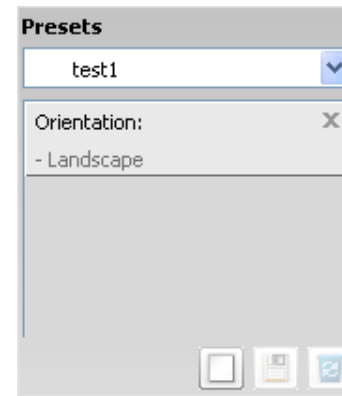
You can check the machine's current status pressing the **Printer Status** button (see "Using Dell Printer Status" on page 163).

## Customize Print Preferences

The **Presets** option, which is visible on each preferences tab except for the **Dell** tab, allows you to save the current preferences for future use.

To save a **Presets** item, follow these steps:



- 1 Change the settings as needed on each tab.
- 2 Enter a name for the item in the **Presets** input box.



- 3 Click  (**Add**). When you save **Presets**, all current driver settings are saved.

# Basic printing



Select more options and click  (**Update**), settings will be added to the Presets you made. To use a saved setting, select it from the **Presets** drop-down list. The machine is now set to print according to the settings you have selected. To delete saved settings, select it from the **Presets** drop-down list and click  (**Delete**).

You can also restore the printer driver's default settings by selecting **Default Preset** from the **Presets** drop-down list.

## Using help


Click the option you want to know on the **Printing Preferences** window and press **F1** on your keyboard.

## Eco printing

The **Eco** function cuts toner consumption and paper usage. The **Eco** function allows you to save print resources and lead you to eco-friendly printing.

If you press the **Eco** button from the control panel, eco mode is enabled. The default setting of Eco mode is **Multiple Pages per Side (2)** and **Toner Save**.

## Setting eco mode on the driver

Open the Eco tab to set Eco mode. When you see the eco image () , that means the eco mode is currently enabled.

### Eco options

- **Printer Default:** Follows the settings from the machine's control panel.
- **None:** Disables Eco mode.
- **Eco Printing:** Enables eco mode. Activate the various Eco items you want to use.
- **Password:** If the administrator fixed to enable the Eco mode, you have to enter the password to change the status.

# Basic printing


## Result simulator

**Result Simulator** shows the results of reduced emission of carbon dioxide, used electricity, and the amount of saved paper in accordance with the settings you selected.


- The results are calculated on the basis that the total number of printed paper is one hundred without a blank page when the Eco mode is disabled.
- Refers to the calculation coefficient about CO<sub>2</sub>, energy, and paper from **IEA**, the index of Ministry of Internal Affairs and Communication of Japan and [www.remanufacturing.org.uk](http://www.remanufacturing.org.uk). Each model has a different index.
- The power consumption in printing mode refers to the average printing power consumption of this machine.
- The actual amount displayed is only an estimate as the actual amount may differ depending on the operating system used, computing performance, application software, connection method, media type [thickness], media size, job complexity, etc.

# Basic copying

## Basic copy

- 1 Place a single document face down on the document glass (see "Loading originals" on page 34).
- 2 If you want to customize the copy settings such as **Reduce/Enlarge**, **Darkness**, **Contrast** or **Original Type**, from Dell Printer Manager, click the Device Setting tab > Copy tab (see "Using Dell Printer Manager" on page 160).
- 3 Enter the number of copies using "+" or "-" button, if necessary.
- 4 Press  (**Start**).



If you need to cancel the copying job during the operation, press  (**Stop/Clear**) and the copying will stop.

## ID card copying

Your machine can print 2-sided originals on one sheet.

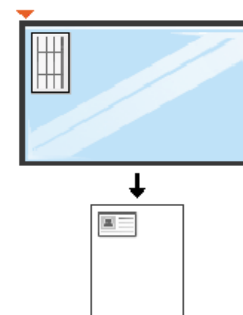
The machine prints one side of the original on the upper half of the paper and the other side on the lower half without reducing the size of the original. This feature is helpful for copying a small-sized item such as business card.



- The original must be placed on the scanner glass to use this feature.
- If the machine set to Eco mode, this feature is not available.

Depending on the model, the operating procedure may differ.

- 1 Press **ID Copy** on the control panel.
- 2 Place the front side of an original facing down on the scanner glass where arrows indicate as shown. Then, close the scanner lid.



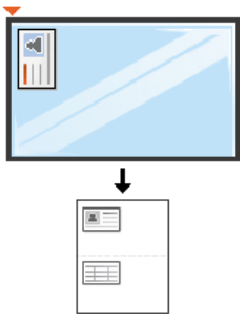
# Basic copying

3 **Place Front Side and Press [Start]** appears on the display.

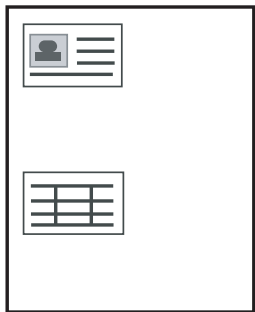
4 Press  (**Start**).


Your machine begins scanning the front side and shows **Place Back Side and Press [Start]**.

5 Turn the original over and place it on the scanner glass where arrows indicate as shown. Then, close the scanner lid.



6 Press  (**Start**) button.



- If you do not press the  (**Start**) button, only the front side will be copied.
- If the original is larger than the printable area, some portions may not be printed.

# Basic scanning



For special scanning features, refer to the Advanced Guide (see "Scan features" on page 148).


## Basic Scanning

This is the normal and usual procedure for scanning originals.

This is a basic scanning method for USB-connected machine.


- 1 Place a single document face down on the document glass, or load the documents face up into the document feeder (see "Loading originals" on page 34).
- 2 Press **Scan to** on the control panel.



If you see **Not Available** message, check the port connection, or select **Enable Scan from Device Panel** in **Dell Printer Manager** >  Switch to advanced mode > **Scan to PC Settings**.

- 3 Select the scan destination you want and press **OK**.  
Default setting is **My Documents**.



- You can create and save the frequently used settings as a profile list. Also you can add and delete the profile and save each profile to a different path.
- To manage profiles in **Dell Printer Manager** >  Switch to advanced mode > **Scan to PC Settings**.

- 4 Select the option you want and press **Save**.
- 5 Scanning begins.



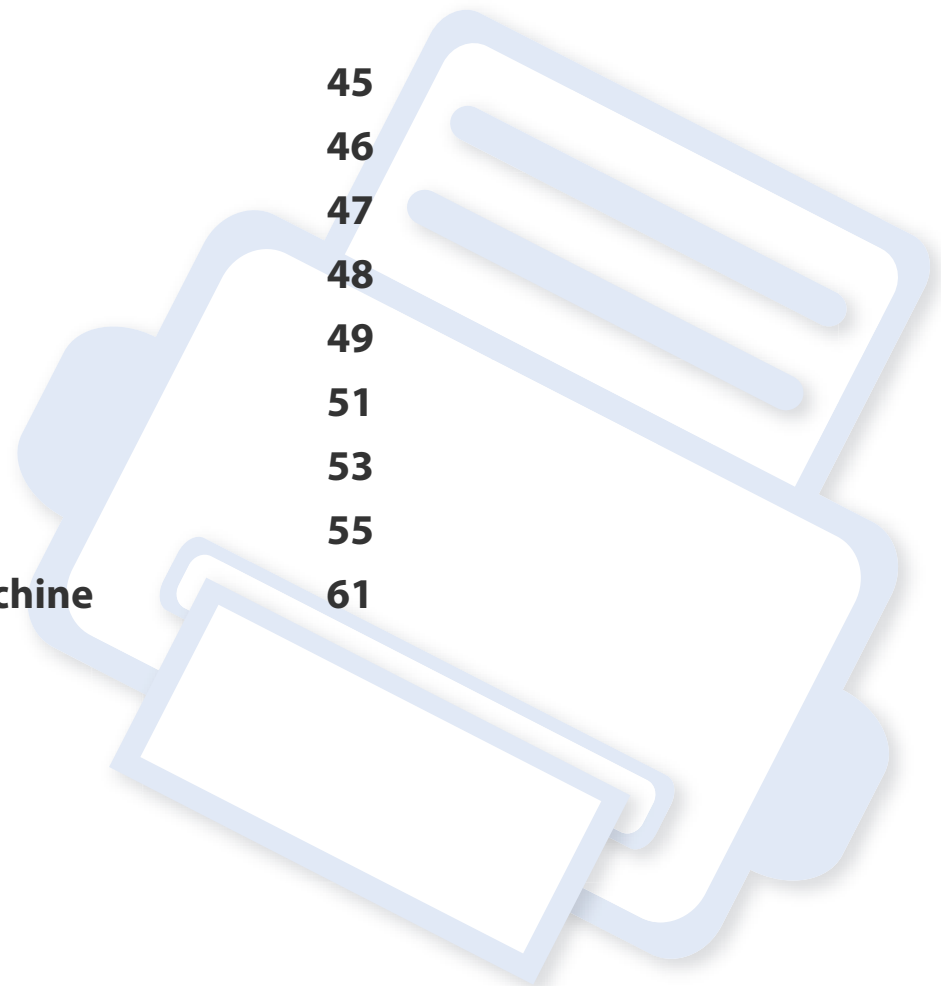
Scanned image is saved in computer's **C:\Users\users name\My Documents**. The saved folder may differ, depending on your operating system or the application you are using.



# 3. Maintenance

This chapter provides information about purchasing supplies, accessories and maintenance parts available for your machine.

- **Ordering supplies and accessories** 45
- **Available supplies** 46
- **Available maintenance parts** 47
- **Installing accessories** 48
- **Storing the toner cartridge** 49
- **Redistributing toner** 51
- **Replacing the toner cartridge** 53
- **Cleaning the machine** 55
- **Tips for moving & storing your machine** 61





# Ordering supplies and accessories



Available accessories may differ from country to country. Contact your sales representatives to obtain the list of available supplies, and maintenance parts.

To order Dell-authorized supplies, accessories, and maintenance parts, contact your local Dell dealer or the retailer where you purchased your machine. You can also visit [www.dell.com/supplies](http://www.dell.com/supplies), and then select your country/region to obtain the contact information for service.

# Available supplies

When supplies reach the end of their life spans, you can order the followings of supplies for your machine:

Type	Average yield <sup>a</sup>	Part name
Toner cartridge	Approx. 1,500 pages	YK1PM (All countries except China)
		15RRN (For China only)

a. Declared yield value in accordance with ISO/IEC 19752. The number of pages may be affected by operating environment, printing interval, graphics, media type and media size.



Depending on the options, percentage of image area and job mode used, the toner cartridge's lifespan may differ.



When purchasing new toner cartridges or other supplies, these must be purchased in the same country as the machine you are using. Otherwise, new toner cartridges or other supplies will be incompatible with your machine due to different configurations of toner cartridges and other supplies according to the specific country conditions.



Dell does not recommend using non-genuine Dell toner cartridge such as refilled or remanufactured toner. Dell cannot guarantee non-genuine Dell toner cartridge's quality. Service or repair required as a result of using non-genuine Dell toner cartridges will not be covered under the machine's warranty.

# Available maintenance parts

To purchase maintenance parts, contact the source where you bought the machine. Replacing maintenance parts can be performed only by an authorized service provider, dealer, or the retailer where you bought the machine. The warranty does not cover the replacement of any maintenance parts once it has reached its "Average yield".

Maintenance parts are replaced at specific intervals to avoid print quality and paper feed problems resulting from worn parts, see table below. The purpose of which is to maintain your machine in top working condition. The maintenance parts below should be replaced when the life span of each item has been met.

<b>Parts</b>	<b>Average yield<sup>a</sup></b>
<b>Transfer Roller</b>	Approx. 30,000 pages
<b>Fuser Unit</b>	Approx. 30,000 pages
<b>Pick-Up Roller</b>	Approx. 30,000 pages
<b>Feed Roller</b>	Approx. 30,000 pages

a. It will be affected by the operating system used, computing performance, application software, connecting method, media, media size and job complexity.

# Installing accessories

When you install optional devices, such as optional tray, memory, etc, this machine automatically detects and sets the optional devices. If you cannot use the optional devices you installed in this driver, you can set the optional devices in **Device Settings** to use.

- 1 Click the Windows **Start** menu.
  - For Windows XP/2003, select **Printers and Faxes**.
  - For Windows 2008/Vista, select **Control Panel > Hardware and Sound>Printers**.
  - For Windows 7, select **Control Panel > Hardware and Sound>Device and Printers**.
  - For Windows Server 2008 R2, select **Control Panel > Hardware>Device and Printers**.
  - For Windows 8, from the **Charms**, select **Search > Settings**.
  - For Windows 8, search for **Device and Printers**.
- 2 Right-click your machine.
- 3 For Windows XP/2003/2008/Vista, press **Properties**.
  - For Windows 7, Windows Server 2008 R2, and Windows 8, from context menus, select **Printer properties**.



If **Printer properties** item has a ► mark, you can select other printer drivers connected with the selected printer.

- 4 Select **Device Options** or **Device Settings**.



The **Printer properties** window may differ depending on the driver or operating system you are using.

- 5 Select the appropriate option.



Some menus may not appear in the display depending on options or models. If so, it is not applicable to your machine.

- **Tray Options:** Select the optional tray you installed. You can select the tray.
  - **Storage Options:** Select the optional memory you installed. If this feature is checked, you can select the **Print Mode**.
  - **Printer Configuration:** Select the printer language for the print job.
  - **Administrator Settings:** You can select the **Printer status** and **EMF Spooling**.
  - **Custom Paper Size Settings:** You can specify custom paper size.
- 6 Click **OK** until you exit the **Printer properties** window.

# Storing the toner cartridge

Toner cartridges contain components that are sensitive to light, temperature and humidity. Dell suggests users follow these recommendations to ensure optimal performance, highest quality, and longest life from your new Dell toner cartridge.

Store this cartridge in the same environment in which the printer will be used. This should be in controlled temperature and humidity conditions. The toner cartridge should remain in its original and unopened package until installation – if original packaging is not available, cover the top opening of the cartridge with paper and store in a dark cabinet.

Opening the cartridge package prior to use dramatically shortens its useful shelf and operating life. Do not store on the floor. If the toner cartridge is removed from the printer, follow the instructions below to store the toner cartridge properly.

- Store the cartridge inside the protective bag from the original package.
- Store lying flat (not standing on end) with the same side facing up as if it were installed in the machine.
- Do not store consumables in any of the following conditions:
  - Temperature greater than 40°C (104°F).
  - Humidity range less than 20% or greater than 80%.
  - An environment with extreme changes in humidity or temperature.
  - Direct sunlight or room light.
  - Dusty places.
  - A car for a long period of time.

- An environment where corrosive gases are present.
- An environment with salty air.

## Handling instructions

- Do not touch the surface of the photoconductive drum in the cartridge.
- Do not expose the cartridge to unnecessary vibrations or shock.
- Never manually rotate the drum, especially in the reverse direction; this can cause internal damage and toner spillage.

## Toner cartridge usage

Dell Inc. does not recommend or approve the use of non-Dell brand toner cartridges in your printer including generic, store brand, refilled, or remanufactured toner cartridges.



Dell's printer warranty does not cover damage to the machine caused by the use of a refilled, remanufactured, or non-Dell branded toner cartridges.

# Storing the toner cartridge

## Estimated cartridge life

Estimated cartridge life (the life of the toner cartridge yield) depends on the amount of toner that print jobs require. The actual print yield may vary depending on the print density of the pages you print on, operating environment, percentage of image area, printing interval, media type and/or media size. For example, if you print a lot of graphics, the consumption of the toner is higher and you may need to change the cartridge more often.

# Redistributing toner

When the toner cartridge is near the end of its life:

- White streaks or light printing occurs and/or density variation side to side.
- The **Status** LED blinks red. In the case of machine with a **Toner** LED, it blinks orange.

If this happens, you can temporarily improve print quality by redistributing the remaining toner in the cartridge. In some cases, white streaks or light printing will still occur even after you have redistributed the toner.

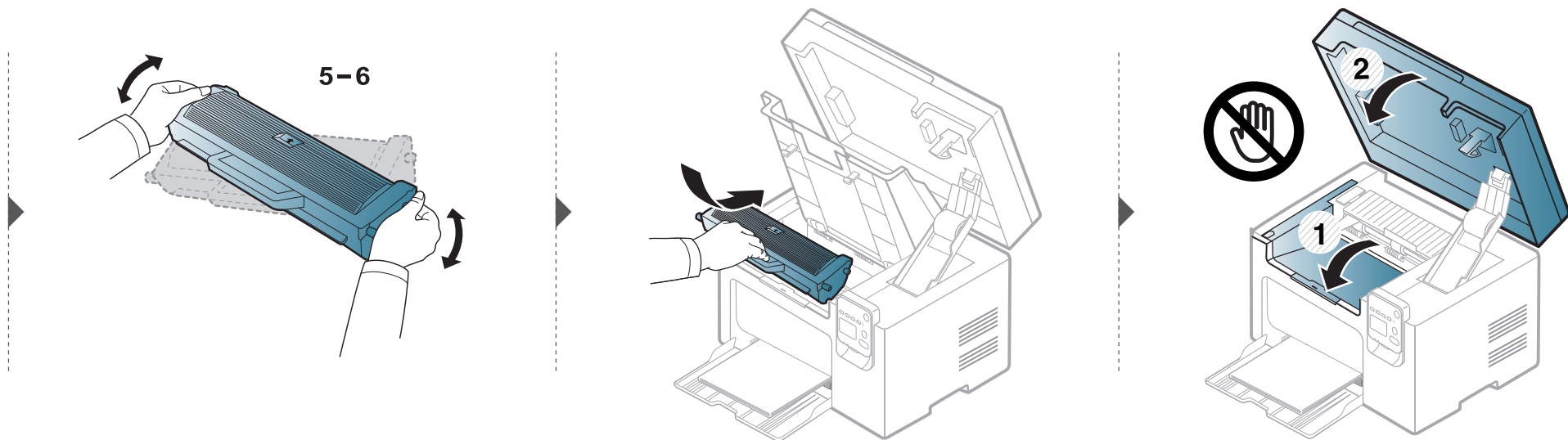
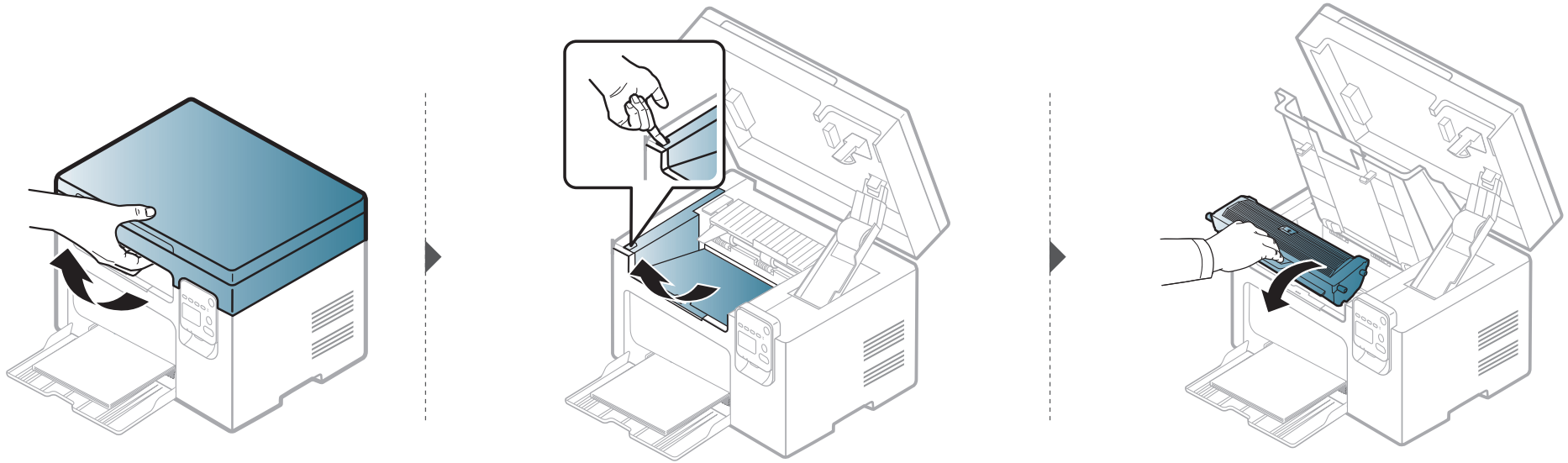


Illustrations on this user's guide may differ from your machine depending on its options or models. Check your machine type (see "Front view" on page 17).



- To prevent damage to the toner cartridge, do not expose it to light for more than a few minutes. Cover it with a piece of paper, if necessary.
- Do not touch the green area of the toner cartridge. Use the handle on the cartridge to avoid touching this area.
- Do not use sharp objects such as a knife or scissors to open the toner cartridge package. They might scratch the drum of the cartridge.
- If toner gets on your clothing, wipe it off with a dry cloth and wash clothing in cold water. Hot water sets toner into fabric.
- When opening a scan unit, hold the document feeder and scan unit together.

# Redistributing toner





# Replacing the toner cartridge



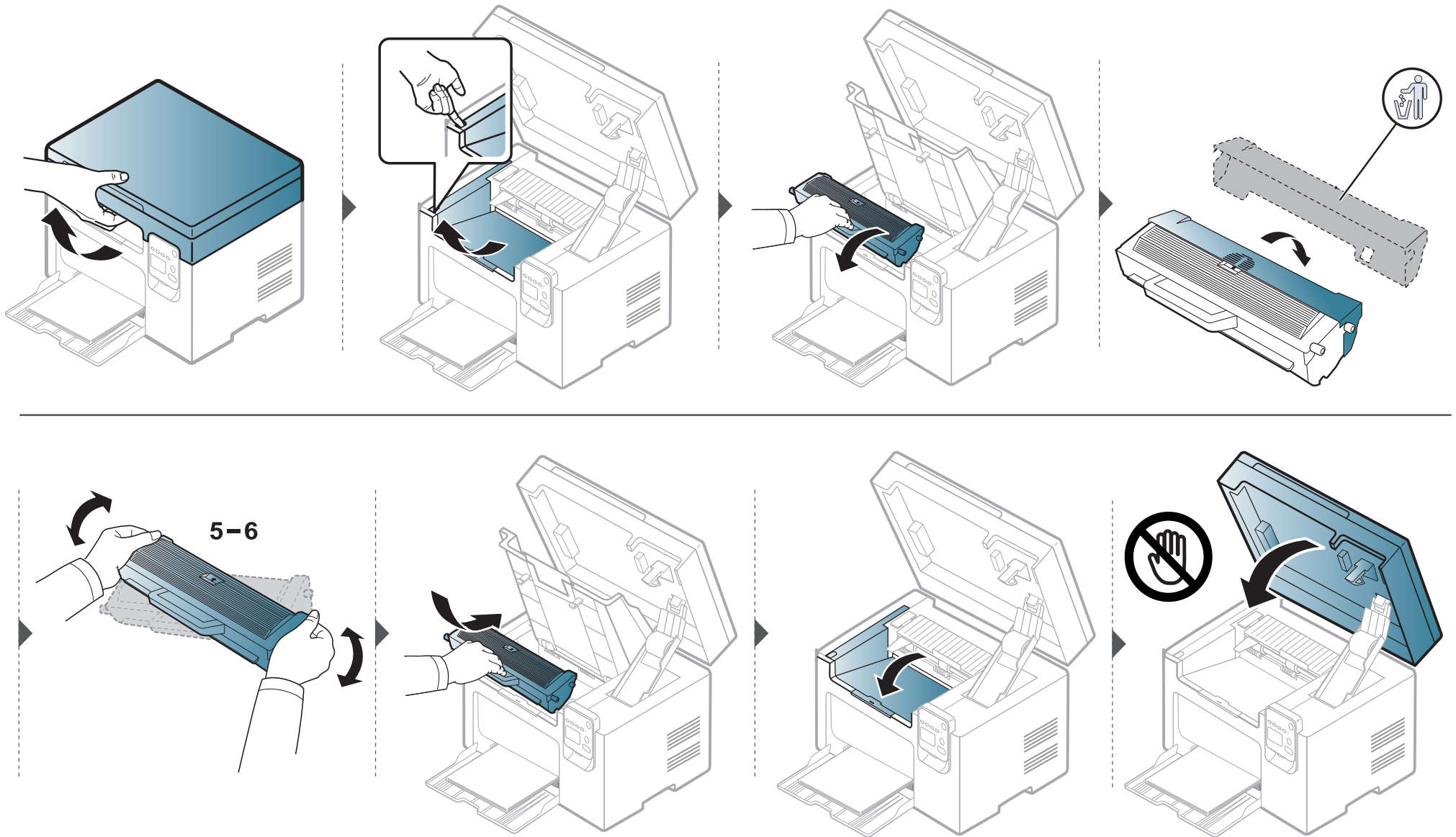
- Shake the toner cartridge thoroughly, it will increase the initial print quality.
- Illustrations on this user's guide may differ from your machine depending on its options or models. Check your machine type (see "Front view" on page 17).



- To prevent damage to the toner cartridge, do not expose it to light for more than a few minutes. Cover it with a piece of paper, if necessary.
- Do not touch the green area of the toner cartridge. Use the handle on the cartridge to avoid touching this area.
- Do not use sharp objects such as a knife or scissors to open the toner cartridge package. They might scratch the drum of the cartridge.
- If toner gets on your clothing, wipe it off with a dry cloth and wash clothing in cold water. Hot water sets toner into fabric.
- When opening a scan unit, hold the document feeder and scan unit together.

When a toner cartridge has reached the end of life, the machine will stop printing.

# Replacing the toner cartridge



# Cleaning the machine

If printing quality problems occur or if you use your machine in a dusty environment, you need to clean your machine regularly to keep it in the best printing condition and use your machine longer.



- Cleaning the cabinet of the machine with cleaning materials containing large amounts of alcohol, solvents, or other strong substances can discolor or distort the cabinet.
- If your machine or the surrounding area is contaminated with toner, we recommend you use a cloth or tissue dampened with water to clean it. If you use a vacuum cleaner, toner blows in the air and might be harmful to you.

## Cleaning the outside

Clean the machine cabinet with a soft, lint-free cloth. Dampen the cloth slightly with water, but be careful not to let any water drip onto or into the machine.

# Cleaning the machine

## Cleaning the inside

During the printing process, paper, toner, and dust particles can accumulate inside the machine. This buildup can cause print quality problems, such as toner specks or smearing. Cleaning the inside of the machine clears and reduces these problems.

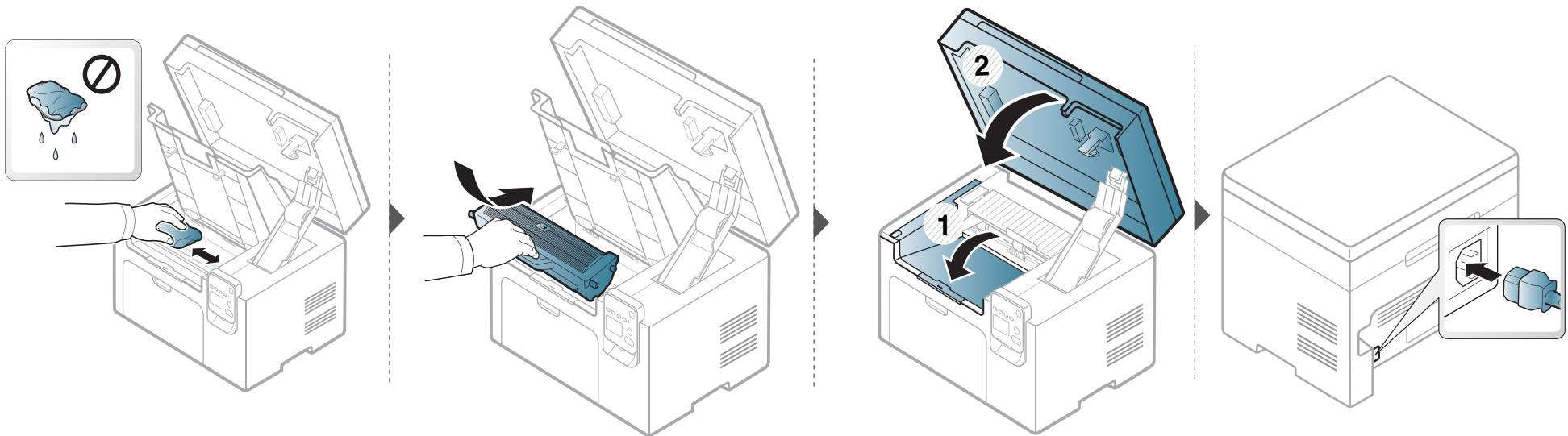
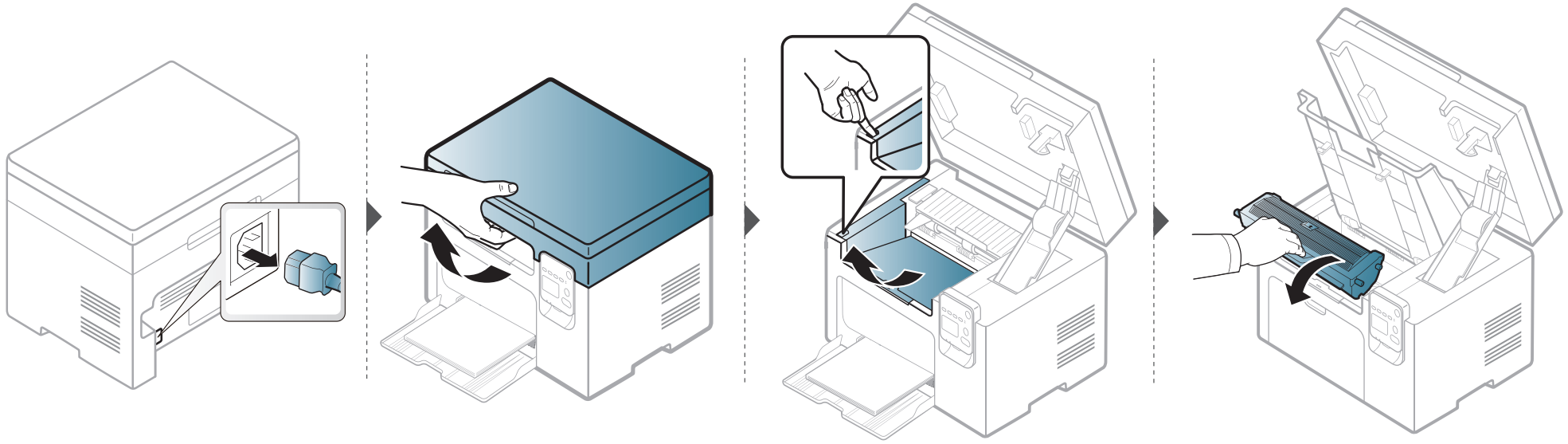


- To prevent damage to the toner cartridge, do not expose it to light for more than a few minutes. Cover it with a piece of paper, if necessary.
- Do not touch the green area of the toner cartridge. Use the handle on the cartridge to avoid touching this area.
- Use a dry lint free cloth when cleaning the inside of the machine, be careful not to damage the transfer roller or any other inside parts. Do not use solvents such as benzene or thinner. Printing quality problems can occur and cause damage to the machine.



- Use a dry lint-free cloth to clean the machine.
- Turn the machine off and unplug the power cord. Wait for the machine to cool down. If your machine has a power switch, turn the power switch off before cleaning the machine.
- Illustrations on this user's guide may differ from your machine depending on its options or models. Check your machine type (see "Front view" on page 17).
- When opening a scan unit, hold the document feeder and scan unit together.

# Cleaning the machine

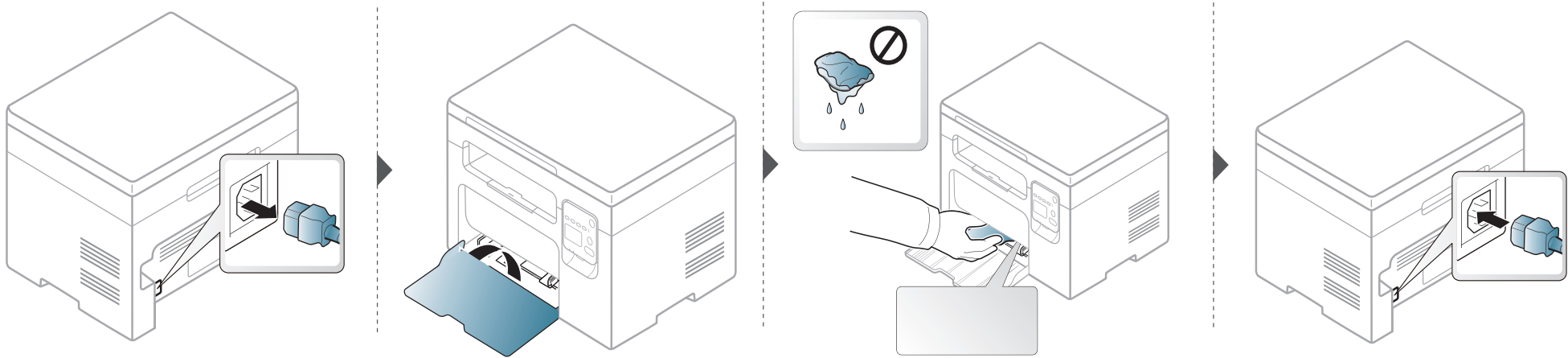


# Cleaning the machine

## Cleaning the pickup roller



- Turn the machine off and unplug the power cord. Wait for the machine to cool down. If your machine has a power switch, turn the power switch off before cleaning the machine.
- Illustrations on this user's guide may differ from your machine depending on its options or models. Check your machine type (see "Front view" on page 17).



# Cleaning the machine

## Cleaning the scan unit

Keeping the scan unit clean helps ensure the best possible copies. We suggest that you clean the scan unit at the start of each day and during the day as needed.

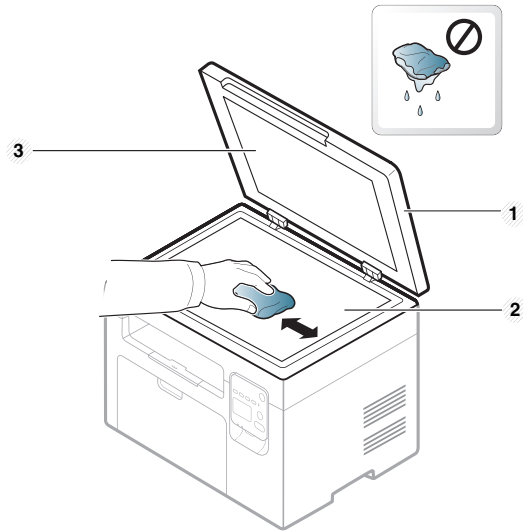


- Turn the machine off and unplug the power cord. Wait for the machine to cool down. If your machine has a power switch, turn the power switch off before cleaning the machine.
- Illustrations on this user's guide may differ from your machine depending on its options or models. Check your machine type (see "Front view" on page 17).

- 1 Slightly dampen a soft, lint-free cloth or paper towel with water.
- 2 Lift and open the scanner lid.

# Cleaning the machine

- 3** Wipe the scanner glass until it is clean and dry.



- 1** Scanner lid
- 2** Scanner glass
- 3** White sponge sheet

- 4** Close the scanner lid.



# Tips for moving & storing your machine



- When moving the machine, do not tilt or turn it upside down. Otherwise, the inside of the machine may be contaminated by toner, which can cause damage to the machine or reduce print quality.
- When moving the machine, make sure at least two people are holding the machine securely.



# 4. Troubleshooting

This chapter gives helpful information for what to do if you encounter an error.

- **Tips for avoiding paper jams** 63
- **Clearing paper jams** 64
- **Understanding the status LED** 68




This chapter gives helpful information for what to do if you encounter an error. If your machine has a display screen, check the message on the display screen first to solve the error. If you cannot find a solution to your problem in this chapter, refer to the **Troubleshooting** chapter in the Advanced Guide (see "Troubleshooting" on page 168). If you cannot find a solution in the User's Guide or the problem persists, call for service.

# Tips for avoiding paper jams


By selecting the correct media, most paper jams can be avoided. To avoid paper jams, refer to the following guidelines:

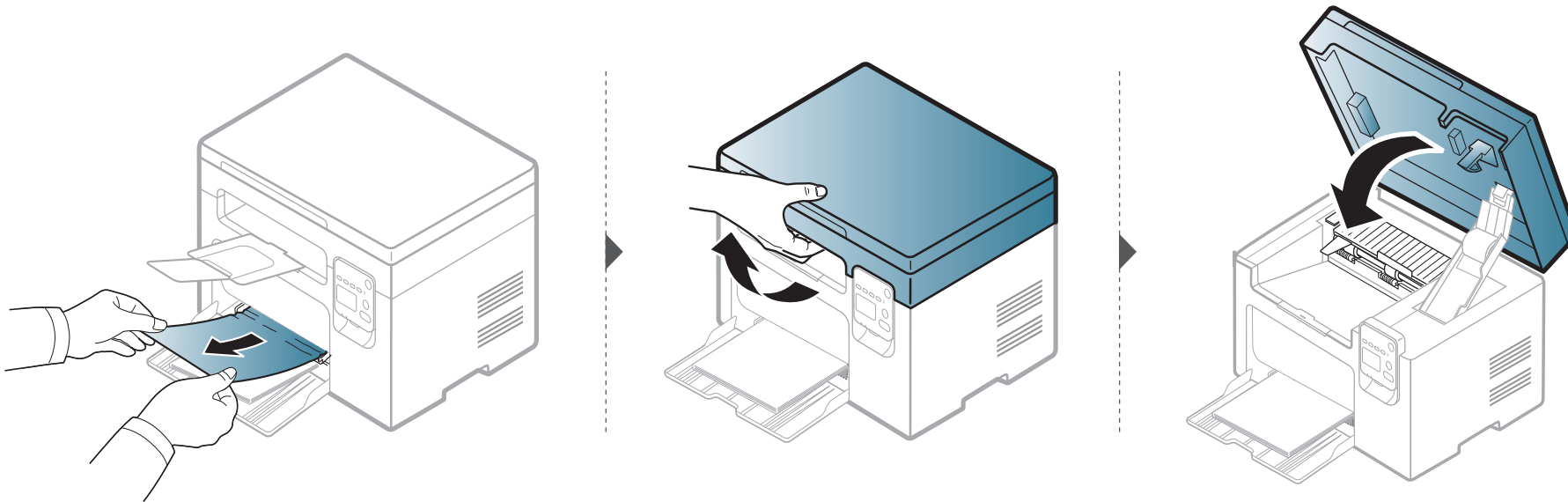
- Ensure that the adjustable guides are positioned correctly (see "Tray overview" on page 26).
- Do not remove paper from the tray while your machine is printing.
- Flex, fan, and straighten paper before loading.
- Do not use creased, damp, or highly curled paper.
- Do not mix papers in a tray.
- Use only recommended print media (see "Print media specifications" on page 73).

# Clearing paper jams

 To avoid tearing the paper, pull the jammed paper out slowly and gently.

## In tray

 Illustrations on this user's guide may differ from your machine depending on its options or models. Check your machine type (see "Front view" on page 17).



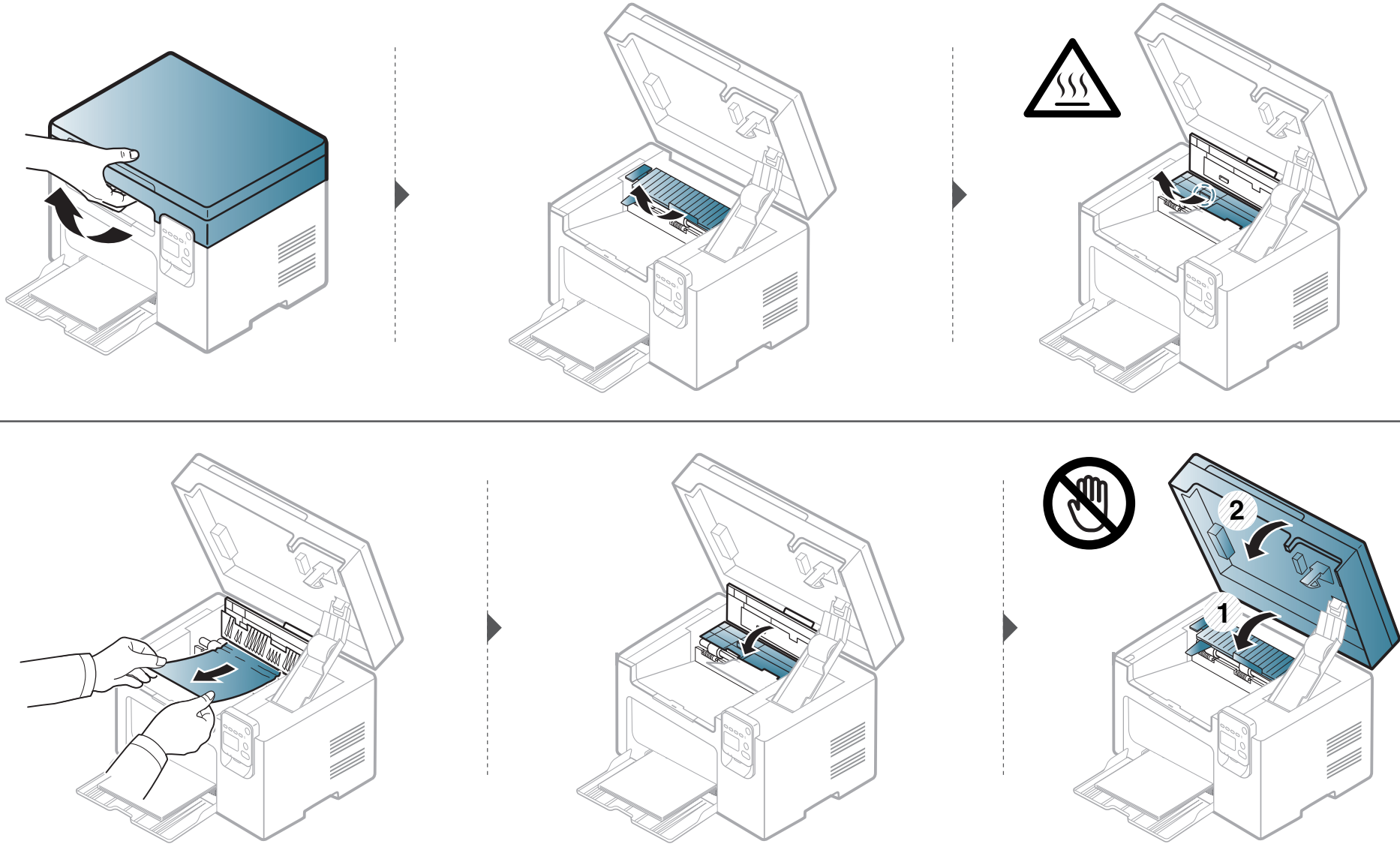
# Clearing paper jams

## Inside the machine



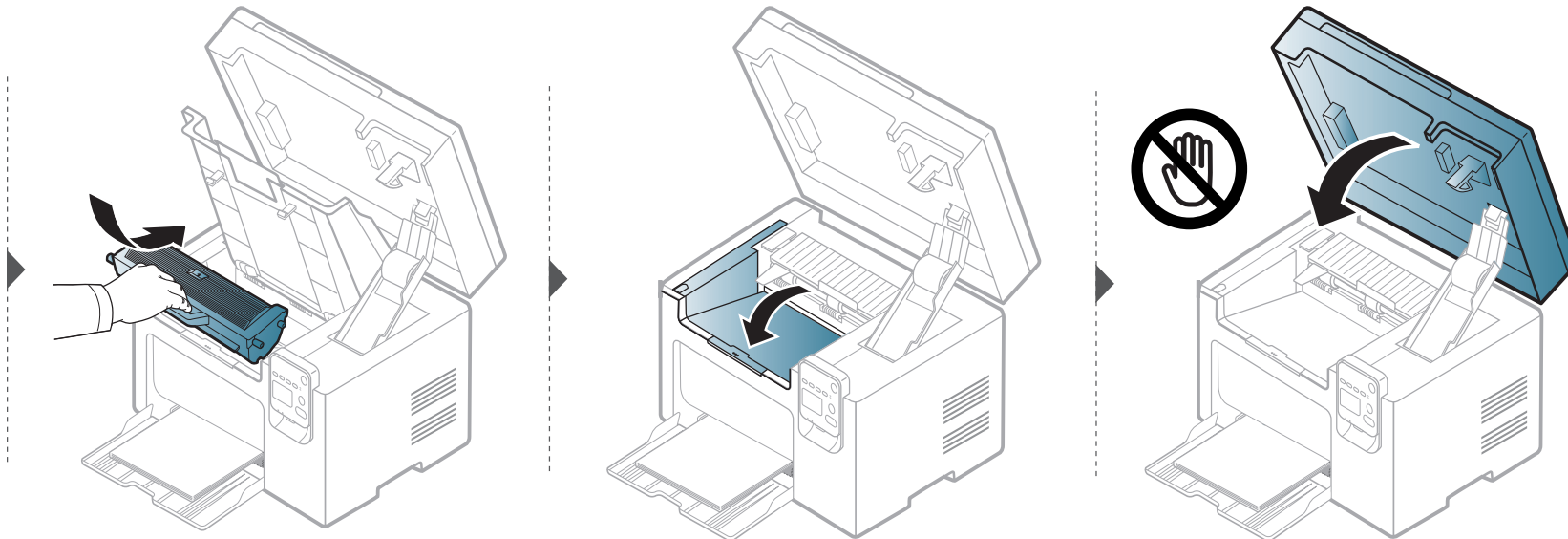
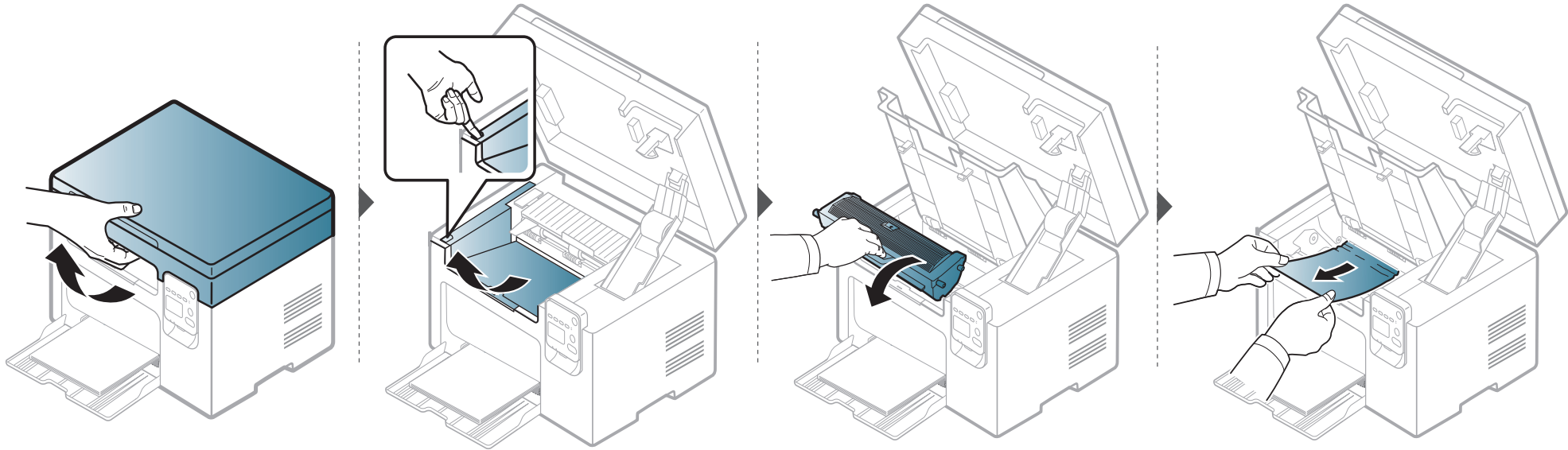
- The fuser area is hot. Take care when removing paper from the machine.
- Illustrations on this user's guide may differ from your machine depending on its options or models. Check your machine type (see "Front view" on page 17).

# Clearing paper jams



# Clearing paper jams

If you do not see the paper in this area, stop and go to next step:



# Understanding the status LED

The color of the LED indicates the machine's current status.





- Some LEDs may not be available depending on model or country (see "Control panel overview" on page 19).
- To resolve the error, look at the error message and its instructions from the troubleshooting part.
- You also can resolve the error with the guideline from the computers's Dell Printing Status (see "Using Dell Printer Status" on page 163 ).
- If the problem persists, call a service representative.

LED	Status	Description	
Status	Off	The machine is off-line.	
	Green	Blinking	When the backlight blinks, the machine is receiving or printing data.
		On	<ul style="list-style-type: none"><li>• The machine is on-line and can be used.</li></ul>
	Red	Blinking	<ul style="list-style-type: none"><li>• A minor error has occurred and the machine is waiting for the error to be cleared. Check the display message. When the problem is cleared, the machine resumes.</li><li>• Small amount of toner is left in the cartridge. The estimated cartridge life<sup>a</sup> of toner is close. Prepare a new cartridge for replacement. You may temporarily increase the printing quality by redistributing the toner (see "Redistributing toner" on page 51).<sup>b</sup></li></ul>
			On



# Understanding the status LED

LED	Status	Description
 <b>WPS<sup>b</sup></b>	<b>Blue</b>	<b>Blinking</b> The machine is connecting to a wireless network.
		<b>On</b> The machine is connected to a wireless network (see "Wireless network setup" on page 108).
		<b>Off</b> The machine is disconnected from a wireless network.
 <b>Power/ Wakeup</b>	<b>Blue</b>	<b>On</b> The machine is in power save mode.
		<b>Off</b> The machine is in ready mode or machine's power is off.
<b>Eco</b>	<b>Green</b>	<b>On</b> Eco mode is on. The default setting of Eco mode is 2-up and toner save.
		<b>Off</b> Eco mode is off.
<b>Toner<sup>b</sup></b>	<b>Orange</b>	<b>Blinking</b> Small amount of toner is left in the cartridge. The estimated cartridge life <sup>a</sup> of toner is close. Prepare a new cartridge for replacement. You may temporarily increase the printing quality by redistributing the toner (see "Redistributing toner" on page 51).
		<b>On</b> A toner cartridge has almost reached its estimated cartridge life <sup>a</sup> . It is recommended to replace the toner cartridge (see "Replacing the toner cartridge" on page 53).
		<b>Off</b> All toner cartridges are at normal capacity.

a. Estimated cartridge life means the expected or estimated toner cartridge life, which indicates the average capacity of print-outs and is designed pursuant to ISO/IEC 19752. The number of pages may be affected by operating environment, percentage of image area, printing interval, graphics, media and media size. Some amount of toner may remain in the cartridge even when red LED is on and the printer stops printing.

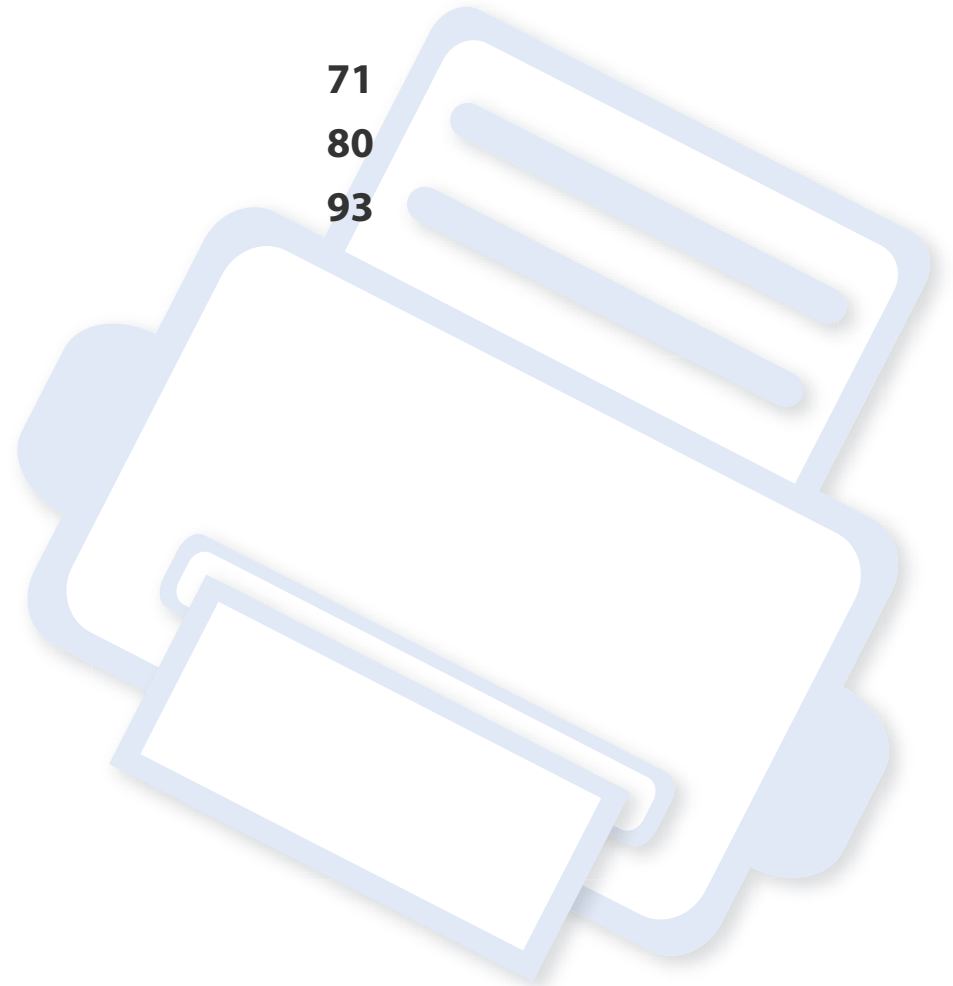
b. Some LEDs may not be available depending on model or country (see "Control panel overview" on page 19).



# 5. Appendix

This chapter provides product specifications and information concerning applicable regulations.

- **Specifications** 71
- **Regulatory information** 80
- **Copyright** 93



# Specifications

## General specifications



The specification values listed below are subject to change without notice. See [www.dell.com](http://www.dell.com) for possible changes in information.

Items		Description		
<b>Dimension</b>	<b>Width x Length x Height</b>	B1163/B1163w	389 x 274 x 249 mm (15.31 x 10.79 x 9.80 inches)	
<b>Weight</b>	<b>Machine with consumables</b>	B1163/B1163w	7.5 Kg (16.53 lbs)	
<b>Noise Level<sup>a</sup></b>	<b>Ready mode</b>	Less than 27 dB (A)		
	<b>Print mode</b>	Less than 50 dB (A)		
	<b>Copy mode</b>	Scanner glass	Less than 50 dB (A)	
		Document feeder	Less than 52 dB (A)	
	<b>Scan mode</b>	Scanner glass	Less than 52 dB (A)	
<b>Temperature</b>	<b>Operation</b>	10 to 32°C (50 to 89.6°F)		
	<b>Storage (packed)</b>	0 to 40°C (-4 to 104°F)		
<b>Humidity</b>	<b>Operation</b>	20 to 80% RH		
	<b>Storage (packed)</b>	10 to 80% RH		
<b>Power rating<sup>b</sup></b>	<b>110 volt models</b>	AC 110 - 127 V		
	<b>220 volt models</b>	AC 220 - 240 V		

# Specifications

	Items	Description
<b>Power consumption</b>	<b>Average operating mode</b>	Less than 270 W
	<b>Ready mode</b>	Less than 75 W
	<b>Power save mode<sup>c</sup></b>	Less than 3 W
	<b>Power off mode<sup>d</sup></b>	Less than 0.5 W
<b>Wireless</b>	<b>Module</b>	SPW-B4319S

a. Sound Pressure Level, ISO 7779. Configuration tested: basic machine installation, A4 paper, simplex printing.

China only: If the equipment's noise is louder than 63 db (A), the equipment should be placed in region of relatively independent advice.

b. See the rating label on the machine for the correct voltage (V), frequency (hertz) and of current (A) for your machine.

c. The power consumption of power save mode may be affected by machine's status, setting conditions, operating environment.

d. Power consumption can be completely avoided only when the power cable is not connected.

# Specifications

## Print media specifications

Type	Size	Dimensions	Print media weight/Capacity <sup>a</sup>	
			Tray	Manual feeding in tray <sup>b</sup>
Plain paper	Letter	216 x 279 mm (8.5 x 11 inches)	71 to 85 g/m <sup>2</sup> (19 to 23 lbs bond) • 150 sheets of 80 g/m <sup>2</sup> (21 lbs bond)	71 to 85 g/m <sup>2</sup> (19 to 23 lbs bond) • 1 sheet
	Legal	216 x 356 mm (8.5 x 14 inches)		
	US Folio	216 x 330 mm (8.5 x 13 inches)		
	A4	210 x 297 mm (8.27 x 11.69 inches)		
	Oficio	216 x 343 mm (8.5 x 13.5 inches)		
	JIS B5	182 x 257 mm (7.17 x 10.12 inches)		
	ISO B5	176 x 250 mm (6.93 x 9.84 inches)		
	Executive	184 x 267 mm (7.25 x 10.5 inches)		
	A5	148 x 210 mm (5.83 x 8.27 inches)		
Envelope	Envelope Monarch	98 x 191 mm (3.87 x 7.5 inches)	75 to 90 g/m <sup>2</sup> (20 to 24 lbs bond) • 10 sheets	75 to 90 g/m <sup>2</sup> (20 to 24 lbs bond) • 1 sheet
	Envelope No. 10	105 x 241 mm (4.12 x 9.5 inches)		
	Envelope DL	110 x 220 mm (4.33 x 8.66 inches)		
	Envelope C5	162 x 229 mm (6.38 x 9.02 inches)		

# Specifications

Type	Size	Dimensions	Print media weight/Capacity <sup>a</sup>	
			Tray	Manual feeding in tray <sup>b</sup>
<b>Thick paper</b>	<b>Refer to the Plain paper section</b>	Refer to the Plain paper section	86 to 120 g/m <sup>2</sup> (23 to 32 lbs bond) • 50 sheets of 120 g/m <sup>2</sup> (32 lbs bond)	86 to 120 g/m <sup>2</sup> (23 to 32 lbs bond) • 1 sheet
<b>Thin paper</b>	<b>Refer to the Plain paper section</b>	Refer to the Plain paper section	60 to 70 g/m <sup>2</sup> (16 to 19 lbs bond) • 160 sheets of 60 g/m <sup>2</sup> (16 lbs bond)	60 to 70 g/m <sup>2</sup> (16 to 19 lbs bond) • 1 sheet
<b>Cotton</b>	<b>Refer to the Plain paper section</b>	Refer to the Plain paper section	75 to 90 g/m <sup>2</sup> (20 to 24 lbs bond) • 150 sheets of 80 g/m <sup>2</sup> (21 lbs bond)	75 to 90 g/m <sup>2</sup> (20 to 24 lbs bond) • 1 sheet
<b>Colored</b>	<b>Refer to the Plain paper section</b>	Refer to the Plain paper section	75 to 90 g/m <sup>2</sup> (20 to 24 lbs bond) • 150 sheets of 80 g/m <sup>2</sup> (21 lbs bond)	75 to 90 g/m <sup>2</sup> (20 to 24 lbs bond) • 1 sheet
<b>Pre-printed</b>	<b>Refer to the Plain paper section</b>	Refer to the Plain paper section	75 to 90 g/m <sup>2</sup> (20 to 24 lbs bond) • 150 sheets of 80 g/m <sup>2</sup> (21 lbs bond)	75 to 90 g/m <sup>2</sup> (20 to 24 lbs bond) • 1 sheet
<b>Recycled</b>	<b>Refer to the Plain paper section</b>	Refer to the Plain paper section	60 to 90 g/m <sup>2</sup> (16 to 24 lbs bond) • 150 sheets of 80 g/m <sup>2</sup> (21 lbs bond)	60 to 90 g/m <sup>2</sup> (16 to 24 lbs bond) • 1 sheet

# Specifications

Type	Size	Dimensions	Print media weight/Capacity <sup>a</sup>	
			Tray	Manual feeding in tray <sup>b</sup>
Labels <sup>c</sup>	Letter, Legal, US Folio, A4, JIS B5, ISO B5, Executive, A5	Refer to the Plain paper section	120 to 150 g/m <sup>2</sup> (32 to 40 lbs bond) • 10 sheets	120 to 150 g/m <sup>2</sup> (32 to 40 lbs bond) • 1 sheet
Card stock	Letter, Legal, US Folio, A4, JIS B5, ISO B5, Executive, A5, Postcard 4x6	Refer to the Plain paper section	121 to 163 g/m <sup>2</sup> (32 to 43 lbs bond) • 10 sheets	121 to 163 g/m <sup>2</sup> (32 to 43 lbs bond) • 1 sheet
Bond paper	Refer to the Plain paper section	Refer to the Plain paper section	• 10 sheets	• 1 sheet
Archive	Refer to the Plain paper section	Refer to the Plain paper section	• 100 sheets	• 1 sheet
<b>Minimum size (custom)</b>		76 x 127 mm (3 x 5 inches)	60 to 163 g/m <sup>2</sup> (16 to 43 lbs bond)	
<b>Maximum size (custom)</b>		216 x 356 mm (8.5 x 14 inches)		

a. Maximum capacity may differ depending on media weight, thickness, and environmental conditions.

b. 1 sheet for manual feeding.

c. The smoothness of the labels used in this machine is 100 to 250 (sheffield). This means the numeric level of smoothness.

# Specifications

## System requirements

### Microsoft® Windows®

Operating system	Requirement (recommended)		
	CPU	RAM	free HDD space
<b>Windows® 2000</b>	Intel® Pentium® II 400 MHz (Pentium III 933 MHz)	64 MB (128 MB)	600 MB
<b>Windows® XP</b>	Intel® Pentium® III 933 MHz (Pentium IV 1 GHz)	128 MB (256 MB)	1.5 GB
<b>Windows Server® 2003</b>	Intel® Pentium® III 933 MHz (Pentium IV 1 GHz)	128 MB (512 MB)	1.25 GB to 2 GB
<b>Windows Server® 2008</b>	Intel® Pentium® IV 1 GHz (Pentium IV 2 GHz)	512 MB (2 GB)	10 GB
<b>Windows Vista®</b>	Intel® Pentium® IV 3 GHz	512 MB (1 GB)	15 GB
<b>Windows® 7</b>	Intel® Pentium® IV 1 GHz 32-bit or 64-bit processor or higher	1 GB (2 GB)	16 GB
	<ul style="list-style-type: none"><li>• Support for DirectX® 9 graphics with 128 MB memory (to enable the Aero theme).</li><li>• DVD-R/W Drive</li></ul>		
<b>Windows Server® 2008 R2</b>	Intel® Pentium® IV 1 GHz (x86) or 1.4 GHz (x64) processors (2 GHz or faster)	512 MB (2 GB)	10 GB
<b>Windows® 8</b>	Intel® Pentium® IV 1 GHz 32-bit or 64-bit processor or higher	1 GB (2 GB)	16 GB



# Specifications



- Internet Explorer 6.0 or higher is the minimum requirement for all Windows operating systems.
- Users who have administrator rights can install the software.
- **Windows Terminal Services** is compatible with your machine.
- For **Windows 2000, Services Pack 4** or higher is required.

## Mac

Operating system	Requirements (Recommended)		
	CPU	RAM	Free HDD space
<b>Mac OS X 10.5</b>	<ul style="list-style-type: none"><li>• Intel® processors</li><li>• 867 MHz or faster Power PC G4/G5</li></ul>	512 MB (1 GB)	1 GB
<b>Mac OS X 10.6</b>	<ul style="list-style-type: none"><li>• Intel® processors</li></ul>	1 GB (2 GB)	1 GB
<b>Mac OS X 10.7 ~ 10.9</b>	<ul style="list-style-type: none"><li>• Intel® processors</li></ul>	2 GB	4 GB

# Specifications

## Linux

Items	Requirements
<b>Operating system</b>	Redhat® Enterprise Linux WS 4, 5, 6(32/64 bit) Fedora 5 ~ 15 (32/64 bit) OpenSuSE® 10.2, 10.3, 11.0, 11.1, 11.2, 11.3, 11.4 (32/64 bit) Mandriva 2007, 2008, 2009, 2009.1, 2010 (32/64 bit) Ubuntu 6.06, 6.10, 7.04, 7.10, 8.04, 8.10, 9.04, 9.10, 10.04, 10.10, 11.04 (32/64 bit) SuSE Linux Enterprise Desktop 10, 11 (32/64 bit) Debian 4.0, 5.0, 6.0 (32/64 bit)
<b>CPU</b>	Pentium IV 2.4GHz (Intel Core™2)
<b>RAM</b>	512 MB (1 GB)
<b>Free HDD space</b>	1 GB (2 GB)

# Specifications

## Network environment



Network and wireless models only (see "Features by models" on page 7).

You need to set up the network protocols on the machine to use it as your network machine. The following table shows the network environments supported by the machine.

Items	Specifications
<b>Network interface</b>	<ul style="list-style-type: none"><li>• 802.11b/g/n Wireless LAN</li></ul>
<b>Network operating system</b>	<ul style="list-style-type: none"><li>• Windows 2000/Server 2003 /Server 2008/XP/Vista/7/Server 2008 R2/8</li><li>• Various Linux OS</li><li>• Mac OS X 10.5 ~10.9</li></ul>
<b>Network protocols</b>	<ul style="list-style-type: none"><li>• TCP/IPv4</li><li>• DHCP, BOOTP</li><li>• DNS, WINS, Bonjour, SLP, UPnP</li><li>• Standard TCP/IP Printing (RAW), LPR, IPP, WSD</li><li>• SNMPv 1/2/3, HTTP, IPSec</li><li>• TCP/IPv6 (DHCP, DNS, RAW, LPR, SNMPv 1/2/3, HTTP, IPSec)</li></ul>
<b>Wireless security</b>	<ul style="list-style-type: none"><li>• Authentication: Open System, Shared Key, WPA Personal, WPA2 Personal (PSK)</li><li>• Encryption: WEP64, WEP128, TKIP, AES</li></ul>

# Regulatory information

This machine is designed for a normal work environment and certified with several regulatory statements.

## Laser safety statement

The printer is certified in the U.S. to conform to the requirements of DHHS 21 CFR, chapter 1 Subchapter J for Class I(1) laser products, and elsewhere is certified as a Class I laser product conforming to the requirements of IEC 60825-1:2007.

Class I laser products are not considered to be hazardous. The laser system and printer are designed so there is never any human access to laser radiation above a Class I level during normal operation, user maintenance or prescribed service condition.

## Warning

Never operate or service the printer with the protective cover removed from laser/scanner assembly. The reflected beam, although invisible, can damage your eyes.

When using this product, these basic safety precautions should always be followed to reduce risk of fire, electric shock, and injury to persons:



CAUTION - CLASS 3B LASER RADIATION WHEN OPEN  
AVOID EXPOSURE TO THE BEAM.

DANGER - LASER RADIATION AVOID DIRECT  
EXPOSURE TO BEAM.

DANGER - RADIATIONS INVISIBLES DU LASER EN CAS  
D'OUVERTURE. EVITER TOUTE EXPOSITION  
DIRECTE AU FAISCEAU.

VORSICHT - UNSICHTBARE LASERSTRAHLUNG, WENN  
ABDECKUNG GEÖFFNET.  
NICHT DEM STRAHL AUSSETZEN.

ATTENZIONE - RADIAZIONE LASER INVISIBILE IN CASO DI  
APERTURA. EVITARE L'ESPOSIZIONE AL FASCIO.

PRECAUCIÓN - RADIACIÓN LASER INVISIBLE CUANDO SE ABRE.  
EVITAR EXPONERSE AL RAYO.

PERIGO - RADIÇÃO LASER INVISÍVEL AO ABRIR. EVITE  
EXPOSIÇÃO DIRECTA AO FEIXE.

GEVAAR - ONZICHTBARE LASERSTRALEN BIJ GEOPENDE  
KLEP. DEZE KLEP NIET OPENEN.

ADVASEL - USYNLIG LASERSTRÅLNING VED ÅBNING.  
UNDGÅ UDSAETTELSE FOR STRÅLNING.

ADVASEL - USYNLIG LASERSTRÅLNING NÅR DEKSEL  
ÅPNES. UNNGÅ EKSPONERING FOR STRÅLEN.

VARNING - OSYNLIG LASERSTRÅLNING NÅR DENNA DEL  
ÄR ÖPPEN. STRÅLEN ÄR FARLIG.

VAROITUS - NÄKYMÄTÖNTÄ LASERSÄTEILYÄ AVATTAESSA.  
VARO SUORAA ALTISTUMISTA SÄTEELLE.

注 意 - 严禁揭开此盖, 以免激光泄露灼伤

주 의 - 이 덮개를 열면 레이저광에 노출될 수 있으므로  
주의하십시오.

# Regulatory information

## Ozone safety



This product's ozone emission rate is under 0.1 ppm. Because ozone is heavier than air, keep the product in a place with good ventilation.

## Mercury Safety



Contains Mercury, Dispose According to Local, State or Federal Laws.(U.S.A. only)

## Power saver



This printer contains advanced energy conservation technology that reduces power consumption when it is not in active use.

When the printer does not receive data for an extended period of time, power consumption is automatically lowered.

ENERGY STAR and the ENERGY STAR mark are registered U.S. marks.

For more information on the ENERGY STAR program see <http://www.energystar.gov>

For ENERGY STAR certified models, the ENERGY STAR label will be on your machine. Check if your machine is ENERGY STAR certified.

## Recycling



Recycle or dispose of the packaging material for this product in an environmentally responsible manner.

# Regulatory information

## China only

### 回收和再循环

为了保护环境，我们公司已经为废弃的产品建立了回收和再循环系统。我们会为您无偿提供回收同类废旧产品的服务。当您要废弃您正在使用的产品时，请您及时与授权耗材更换中心取得联系，我们会及时为您提供服务。

website: [www.dell.com/recycle](http://www.dell.com/recycle)

### 中国能效标识

型号	能效等级	典型能耗 (kW·h)
B1163	1	0.79

依据国家标准 GB 25956-2010



仅适用于海拔2000m以下地区安全使用。

《2000m 以下 9000ft 以下 地区 安全 使用 说明》

“此设备仅适用于海拔2000m以下地区安全使用。”

دېگىز يۈزىدىن 2000 مېتىر تۆۋەن رايونلاردا بىخەتەر ئىشلەتكىلى بولىدۇ

Dan hab yungh youq gij digih haijbaz 2000 m doxroengz haenx ancienz sawjyungh.

## Correct disposal of this product (Waste electrical & electronic equipment)

### (Applicable in countries with separate collection systems)



This marking on the product, accessories or literature indicates that the product and its electronic accessories (e.g. charger, headset, USB cable) should not be disposed of with other household waste at the end of their working life. To prevent possible harm to the environment or human health from uncontrolled waste disposal, please separate these items from other s of waste and recycle them responsibly to promote the sustainable reuse of material resources.

Household users should contact either the retailer where they purchased this product, or their local government office, for details of where and how they can take these items for environmentally safe recycling.

Business users should contact their supplier and check the terms and conditions of the purchase contract. This product and its electronic accessories should not be mixed with other commercial wastes for disposal.

# Regulatory information

## (The United States of America only)

Dispose unwanted electronics through an approved recycler. To find the nearest recycling location, go to our website: [www.dell.com/recyclingdirect](http://www.dell.com/recyclingdirect) Or call, (877) 278 - 0799

## State of California Proposition 65 Warning (US Only)

The California Safe Drinking Water and Toxic Enforcement Act requires the Governor of California to publish a list of chemicals known to the State of California to cause cancer or reproductive toxicity and requires businesses to warn of potential exposure to such chemicals.

WARNING: This product contains chemicals known to the State of California to cause cancer, birth defects or other reproductive harm.  
This appliance can cause low-level exposure to the chemicals, which can be minimized by operating the appliance in a well ventilated area.

## Taiwan only

### 警告

本電池如果更換不正確會有爆炸的危險  
請依製造商說明書處理用過之電池

## Radio frequency emissions

### FCC information to the user

This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions:

- This device may not cause harmful interference, and
- This device must accept any interference received, including interference that may cause undesired operation.

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.

# Regulatory information

- Consult the dealer or experienced radio TV technician for help.



Change or modifications not expressly approved by the manufacturer responsible for compliance could void the user's authority to operate the equipment.

## Canadian radio interference regulations

This digital apparatus does not exceed the Class B limits for radio noise emissions from digital apparatus as set out in the interference-causing equipment standard entitled "Digital Apparatus", ICES-003 of the Industry and Science Canada.

Cet appareil numérique respecte les limites de bruits radioélectriques applicables aux appareils numériques de Classe B prescrites dans la norme sur le matériel brouilleur: "Appareils Numériques", ICES-003 édictée par l'Industrie et Sciences Canada.

## United States of America

### Federal Communications Commission (FCC)

#### Intentional emitter per FCC Part 15

Low power, Radio LAN devices (radio frequency (RF) wireless communication devices), operating in the 2.4 GHz/5 GHz Band, may be present (embedded) in your printer system. This section is only applicable if these devices are present. Refer to the system label to verify the presence of wireless devices.

Wireless devices that may be in your system are only qualified for use in the United States of America if an FCC ID number is on the system label.

The FCC has set a general guideline of 20 cm (8 inches) separation between the device and the body, for use of a wireless device near the body (this does not include extremities). This device should be used more than 20 cm (8 inches) from the body when wireless devices are on. The power output of the wireless device (or devices), which may be embedded in your printer, is well below the RF exposure limits as set by the FCC.

This transmitter must not be collocated or operation in conjunction with any other antenna or transmitter.

Operation of this device is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation of the device.



# Regulatory information



Wireless devices are not user serviceable. Do not modify them in any way. Modification to a wireless device will void the authorization to use it. Contact manufacturer for service.

## FCC Statement for Wireless LAN use:



While installing and operating this transmitter and antenna combination the radio frequency exposure limit of 1m W/cm<sup>2</sup> may be exceeded at distances close to the antenna installed. Therefore, the user must maintain a minimum distance of 20cm from the antenna at all times. This device cannot be colocated with another transmitter and transmitting antenna.

## Russia only

AB57



Минсвязи России



## Germany only

Das Gerät ist nicht für die Benutzung am Bildschirmarbeitsplatz gemäß BildscharbV vorgesehen.

## Turkey only

- RoHS  
EEE Yönetmeliğine Uygundur.  
This EEE is compliant with RoHS.
- Bu ürünün ortalama yaşam süresi 7 yıl, garanti süresi 2 yıldır.

# Regulatory information

## Thailand only

This telecommunication equipment conforms to NTC technical requirement.

## Canada only

This product meets the applicable Industry Canada technical specifications. / Le présent matériel est conforme aux spécifications techniques applicables d'Industrie Canada.

The Ringer Equivalence Number (REN) is an indication of the maximum number of devices allowed to be connected to a telephone interface. The termination of an interface may consist of any combination of devices subject only to the requirement that the sum of the RENs of all the devices not exceed five. / L'indice d'équivalence de la sonnerie (IES) sert à indiquer le nombre maximal de terminaux qui peuvent être raccordés à une interface téléphonique. La terminaison d'une interface peut consister en une combinaison quelconque de dispositifs, à la seule condition que la somme d'indices d'équivalence de la sonnerie de tous les dispositifs n'exécède pas cinq.

## Ringer Equivalence Number

The Ringer Equivalence Number and FCC Registration Number for this machine may be found on the label located on the bottom or rear of the machine. In some instances you may need to provide these numbers to the telephone company.

The Ringer Equivalence Number (REN) is a measure of the electrical load placed on the telephone line, and is useful for determining whether you have "overloaded" the line. Installing several s of equipment on the same telephone line may result in problems making and receiving telephone calls, especially ringing when your line is called. The sum of all Ringer Equivalence Numbers of the equipment on your telephone line should be less than five in order to assure proper service from the telephone company. In some cases, a sum of five may not be usable on your line. If any of your telephone equipment is not operating properly, you should immediately remove it from your telephone line, as it may cause harm to the telephone network.

The equipment complies with Part 68 of the FCC rules and the requirements adopted by the ACTA. On the rear of this equipment is a label that contains, among other information, a product identifier in the format US:AAAEQ##TXXXX. If requested, this number must be provided to the telephone company.

# Regulatory information



FCC Regulations state that changes or modifications to this equipment not expressly approved by the manufacturer could void the user's authority to operate this equipment. In the event that terminal equipment causes harm to the telephone network, the telephone company should notify the customer that service may be stopped. However, where prior notice is impractical, the company may temporarily cease service, providing that they:

- a promptly notify the customer.
- b give the customer an opportunity to correct the equipment problem.
- c inform the customer of the right to bring a complaint to the Federal Communication Commission pursuant to procedures set out in FCC Rules and Regulations Subpart E of Part 68.

## You should also know that:

- Your machine is not designed to be connected to a digital PBX system.
- If you intend to use a computer modem or fax modem on the same phone line as your machine, you may experience transmission and reception problems with all the equipment. It is recommended that no other equipment, except for a regular telephone, share the line with your machine.
- If your area experiences a high incidence of lightning or power surges, we recommend that you install surge protectors for both the power and the telephone lines. Surge protectors can be purchased from your dealer or telephone and electronic specialty stores.

- When programming emergency numbers and/or making test calls to emergency numbers, use a non-emergency number to advise the emergency service dispatcher of your intentions. The dispatcher will give you further instructions on how to actually test the emergency number.
- This machine may not be used on coin service or party lines.
- This machine provides magnetic coupling to hearing aids.

You may safely connect this equipment to the telephone network by means of a standard modular jack, USOC RJ-11C.

## Replacing the Fitted Plug (for UK Only)

### Important

The mains lead for this machine is fitted with a standard (BS 1363) 13 amp plug and has a 13 amp fuse. When you change or examine the fuse, you must re-fit the correct 13 amp fuse. You then need to replace the fuse cover. If you have lost the fuse cover, do not use the plug until you have another fuse cover.

Contact the people from you purchased the machine.

The 13 amp plug is the most widely used in the UK and should be suitable. However, some buildings (mainly old ones) do not have normal 13 amp plug sockets. You need to buy a suitable plug adaptor. Do not remove the moulded plug.

# Regulatory information



If you cut off the moulded plug, get rid of it straight away. You cannot rewire the plug and you may receive an electric shock if you plug it into a socket.

## Important warning:



You must earth this machine.

The wires in the mains lead have the following color code:

- **Green and Yellow:** Earth
- **Blue:** Neutral
- **Brown:** Live

If the wires in the mains lead do not match the colors marked in your plug, do the following:

You must connect the green and yellow wire to the pin marked by the letter “E” or by the safety ‘Earth symbol’ or colored green and yellow or green.

You must connect the blue wire to the pin which is marked with the letter “N” or colored black.

You must connect the brown wire to the pin which is marked with the letter “L” or colored red.

You must have a 13 amp fuse in the plug, adaptor, or at the distribution board.

## Declaration of conformity (European countries)

### Approvals and Certifications

Hereby, Dell Inc. declares that this [B1163 Series] is in compliance with the essential requirements and other relevant provisions of Low Voltage Directive (2006/95/EC), EMC Directive (2004/108/EC).



Hereby, Dell Inc. declares that this [B1163 Series] is in compliance with the essential requirements and other relevant provisions of R&TTE Directive 1999/5/EC.

The declaration of conformity may be consulted at [www.dell.com](http://www.dell.com), go to Support > Download center and enter your printer (MFP) name to browse the EuDoC.

**January 1, 1995:** Council Directive 2006/95/EC Approximation of the laws of the member states related to low voltage equipment.

**January 1, 1996:** Council Directive 2004/108/EC, approximation of the laws of the Member States related to electromagnetic compatibility.

**March 9, 1999:** Council Directive 1999/5/EC on radio equipment and telecommunications terminal equipment and the mutual recognition of their conformity. A full declaration, defining the relevant Directives and referenced standards can be obtained from your Dell Inc. representative.

# Regulatory information

## EC Certification

---

Certification to 1999/5/EC Radio Equipment & Telecommunications Terminal Equipment Directive (FAX)

This Dell product has been self-certified by Dell for pan-European single terminal connection to the analogue public switched telephone network (PSTN) in accordance with Directive 1999/5/EC. The product has been designed to work with the national PSTNs and compatible PBXs of the European countries:

In the event of problems, you should contact the Euro QA Lab of Dell Inc. in the first instance.

The product has been tested against TBR21. To assist in the use and application of terminal equipment which complies with this standard, the European Telecommunication Standards Institute (ETSI) has issued an advisory document (EG 201 121) which contains notes and additional requirements to ensure network compatibility of TBR21 terminals. The product has been designed against, and is fully compliant with, all of the relevant advisory notes contained in this document.

## European radio approval information (for products fitted with EU-approved radio devices)

---

Low power, Radio LAN type devices (radio frequency (RF) wireless communication devices), operating in the 2.4 GHz/5 GHz band, may be present (embedded) in your printer system which is intended for home or office use. This section is only applicable if these devices are present. Refer to the system label to verify the presence of wireless devices.



Wireless devices that may be in your system are only qualified for use in the European Union or associated areas if a CE mark with a Notified Body Registration Number and the Alert Symbol is on the system label.

The power output of the wireless device or devices that may be embedded in your printer is well below the RF exposure limits as set by the European Commission through the R&TTE directive.

### European states qualified under wireless approvals:

EU countries

### European states with restrictions on use:

EU

In France, the frequency range is restricted to 2454-2483.5 MHz for devices above 10 mW transmitting power such as wireless

EEA/EFTA countries

No limitations at this time

# Regulatory information

## Israel only

מס' אישור אלחוטי של משרד התקשורת הוא 51-28466, אסור להחליף את האנטנה המקורית של המכשיר, ולא לעשות בו כל שינוי טכני אחר.

## Regulatory compliance statements

### Wireless guidance

Low power, Radio LAN devices (radio frequency (RF) wireless communication devices), operating in the 2.4 GHz/5 GHz Band, may be present (embedded) in your printer system. The following section is a general overview of considerations while operating a wireless device.

Additional limitations, cautions, and concerns for specific countries are listed in the specific country sections (or country group sections). The wireless devices in your system are only qualified for use in the countries identified by the Radio Approval Marks on the system rating label. If the country you will be using the wireless device in, is not listed, contact your local Radio Approval agency for requirements. Wireless devices are closely regulated and use may not be allowed.

The power output of the wireless device or devices that may be embedded in your printer is well below the RF exposure limits as known at this time. Because the wireless devices (which may be embedded into your printer) emit less energy than is allowed in radio frequency safety standards and recommendations, manufacturer believes these devices are safe for use. Regardless of the power levels, care should be taken to minimize human contact during normal operation.

As a general guideline, a separation of 20 cm (8 inches) between the wireless device and the body, for use of a wireless device near the body (this does not include extremities) is typical. This device should be used more than 20 cm (8 inches) from the body when wireless devices are on and transmitting.

This transmitter must not be collocated or operation in conjunction with any other antenna or transmitter.

Some circumstances require restrictions on wireless devices. Examples of common restrictions are listed below:



Radio frequency wireless communication can interfere with equipment on commercial aircraft. Current aviation regulations require wireless devices to be turned off while traveling in an airplane. IEEE 802.11 (also known as wireless Ethernet) and Bluetooth communication devices are examples of devices that provide wireless communication.

# Regulatory information



In environments where the risk of interference to other devices or services is harmful or perceived as harmful, the option to use a wireless device may be restricted or eliminated. Airports, Hospitals, and Oxygen or flammable gas laden atmospheres are limited examples where use of wireless devices may be restricted or eliminated. When in environments where you are uncertain of the sanction to use wireless devices, ask the applicable authority for authorization prior to use or turning on the wireless device.



Every country has different restrictions on the use of wireless devices. Since your system is equipped with a wireless device, when traveling between countries with your system, check with the local Radio Approval authorities prior to any move or trip for any restrictions on the use of a wireless device in the destination country.



If your system came equipped with an internal embedded wireless device, do not operate the wireless device unless all covers and shields are in place and the system is fully assembled.



Wireless devices are not user serviceable. Do not modify them in any way. Modification to a wireless device will void the authorization to use it. Contact manufacturer for service.



Only use drivers approved for the country in which the device will be used. See the manufacturer System Restoration Kit, or contact manufacturer Technical Support for additional information.

# Regulatory information

China only

## 产品中有害有毒物质或元素的名称及含量

部件名称	有害有毒物质或元素					
	铅 (Pb)	汞 (Hg)	镉 (Cd)	六价铬 (Cr <sup>6+</sup> )	多溴联苯 (PBB)	多溴联苯醚 (PBDE)
塑料	○	○	○	○	○	○
金属 (机箱)	×	○	○	○	○	○
印刷电路部件 (PCA)	×	○	○	○	○	○
电缆 / 连接器	×	○	○	○	○	○
电源设备	×	○	○	○	○	○
电源线	×	○	○	○	○	○
机械部件	×	○	○	○	○	○
卡盒部件	×	○	○	○	○	○
定影部件	×	○	○	○	○	○
扫描仪部件 - CCD (如果有)	×	×	○	○	○	○
扫描仪部件 - 其它 (如果有)	×	○	○	○	○	○
印刷电路板部件 (PBA)	×	○	○	○	○	○
墨粉	○	○	○	○	○	○
滚筒	○	○	○	○	○	○

○：表示该有害有毒物质在该部件所有均质材料中的含量均在 SJ/T 11363-2006 标准规定的限量要求以下。

×：表示该有害有毒物质至少在该部件的某一均质材料中的含量超出 SJ/T 11363-2006 标准规定的限量要求。

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Refer to the '**LICENSE.txt**' file in the provided CD/DVD for the open source license information.

**REV. 2.00**



# User's Guide

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Dell B1163/B1163w

## ADVANCED

This guide provides information about installation, advanced configuration, operation and troubleshooting on various OS environments.

Some features may not be available depending on models or countries.

## BASIC

This guide provides information concerning installation, basic operation and troubleshooting on windows.

# ADVANCED



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# 1. Software Installation

This chapter provides instructions for installing essential and helpful software for use in an environment where the machine is connected via a cable. A locally connected machine is a machine directly attached to your computer using the cable.

- **Installation for Mac** **97**
- **Reinstallation for Mac** **98**
- **Installation for Linux** **99**
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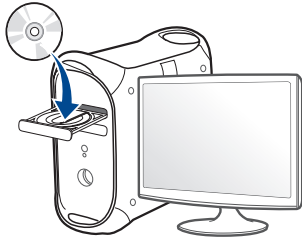


- If you are a Windows OS user, refer to the Basic Guide for installing the machine's driver (see "Installing the driver locally" on page 22).
- Only use a USB cable no longer than 3 meter (118 inches).

# Installation for Mac

**1** Make sure that the machine is connected to your computer and powered on.

**2** Insert the supplied software CD into your CD/DVD drive.



**3** Double-click the CD/DVD icon that appears on your Mac desktop.

- For Mac OS X 10.8, double-click the CD/DVD that appears on **Finder**.

**4** Double-click the **MAC\_Installer** folder > **Installer OS X** icon.

**5** Click **Continue**.

**6** Read the license agreement and click **Continue**.

**7** Click **Agree** to agree to the license agreement.

**8** Click **Install**. All components necessary for machine operations will be installed.

If you click **Customize**, you can choose individual components to install.

**9** Enter the password and click **OK**.

**10** Select **USB Connected Printer** on the **Printer Connection Type** and click **Continue**.

**11** Click **Add Printer** button to select your printer and add it to your printer list.

**12** After the installation is finished, click **Close** or **Restart**.

# Reinstallation for Mac

If the printer driver does not work properly, uninstall the driver and reinstall it.

- 1 Open the **Applications** folder > **Dell** > **Printer Software Uninstaller**.
- 2 To uninstall printer software, click **Continue**.
- 3 Check the program you want to delete and click **Uninstall**.
- 4 Enter the password and click **OK**.
- 5 After the uninstallation is finished, click **Close**.



If a machine has already been added, delete it from the **Print Setup Utility** or **Print & Fax**.

# Installation for Linux

You need to download Linux software packages from the Dell website to install the printer software (<http://www.dell.com/support>).

## Installing the Unified Linux Driver

- 1 Make sure that the machine is connected to your computer and powered on.
- 2 When the **Administrator Login** window appears, type "root" in the **Login** field and enter the system password.



You must log in as a super user (root) to install the machine software. If you are not a super user, ask your system administrator.

- 3 From the Dell website, download the Unified Linux Driver package to your computer.
- 4 Right-click the **Unified Linux Driver** package and extract the package.
- 5 Double click **cdroot > autorun**.
- 6 When the welcome screen appears, click **Next**.
- 7 When the installation is complete, click **Finish**.

The installation program added the Unified Driver Configurator desktop icon and the Unified Driver group to the system menu for your convenience. If you have any difficulties, consult the on-screen help that is available through your system menu or from the driver package Windows applications, such as **Unified Driver Configurator** or **Image Manager**.

# Reinstallation for Linux

If the printer driver does not work properly, uninstall the driver and reinstall it.

- 1 Make sure that the machine is connected to your computer and powered on.
- 2 When the **Administrator Login** window appears, type "root" in the **Login** field and enter the system password.  
You must log in as a super user (root) to uninstall the printer driver. If you are not a super user, ask your system administrator.
- 3 Open **Terminal** program. When the Terminal screen appears, type in the following.  

```
[root@localhost root]#cd /opt/DELL/mfp/uninstall/[root@localhost  
uninstall]#./uninstall.sh
```
- 4 Click **Next**.
- 5 Click **Finish**.





## 2. Using a Network-Connected Machine

This chapter gives you step-by-step instructions for setting up a network connected machine and software.

- **Useful network programs** 102
- **AirPrint** 103
- **Google Cloud Print™** 105
- **Wireless network setup** 108



Supported optional devices and features may differ according to your model (see "Features by models" on page 7).

# Useful network programs

There are several programs available to setup the network settings easily in a network environment. For the network administrator especially, managing several machines on the network is possible.



- Before using the programs below, set the IP address first.
- Some features and optional goods may not be available depending on model or country (see "Features by models" on page 7).

# AirPrint



B1163w only



AirPrint allows you to wirelessly print directly from an iPhone, iPad, or iPod touch running iOS 4.2 or later.

## Setting up AirPrint

Bonjour(mDNS) and IPP protocols are required on your machine to use the **AirPrint** feature. You can enable the **AirPrint** feature by one of the following methods.

- 1 Check whether the machine is connected to the network.
- 2 Start a web browser such as Internet Explorer, Safari, or Firefox and enter your machine's new IP address in the browser window.

For example,



- 3 Click **Login** in the upper right of the Embedded Web Service website.

- 4 Type in the **ID** and **Password**, then click **Login**. If it's your first time logging into Embedded Web Service, type in the below default ID and password. We recommend you to change the default password for security reasons.

- **ID: admin**
- **Password: dell00000**

- 5 When the **Embedded Web Service** window opens, click **Settings > Network Settings**.


- 6 Click **Raw TCP/IP, LPR, IPP** or **mDNS**.

You can enable the IPP protocol or mDNS protocol.


# AirPrint

## Printing via AirPrint

For example, the iPad manual provides these instructions:

- 1 Open your email, photo, web page, or document you want to print.
- 2 Touch the action icon().
- 3 Select **your printer driver name** and option menu to set up.
- 4 Touch **Print** button. Print it out.



**Cancelling print job:** To cancel the printing job or view the print summary, click the print center icon () in multitasking area. You can click cancel in the print center.

# Google Cloud Print™

Google Cloud Print™ is a service that allows you to print to a printer using your smart phone, tablet, or any other web-connected devices. Just register your Google account with the printer, and you are ready to use the Google Cloud Print™ service. You can print your document or email with Chrome OS, Chrome browser, or a Gmail™/ Google Docs™ application on your mobile device, so you don't need to install the printer driver on the mobile device. Refer to the Google website (<http://support.google.com/cloudprint>) for more information about Google Cloud Print™.

## Registering your Google account to the printer



- Make sure the printer machine is turned on and connected to a wired or wireless network that has access to the Internet.
- You should create your Google account in the advance.

- 1 Open the Chrome browser.
- 2 Visit [www.google.com](http://www.google.com).
- 3 Sign in to the Google website with your Gmail™ address.
- 4 Enter your printer's IP address in the address field and press the Enter key or click **Go**.

5 Click **Login** in the upper right corner of the Embedded Web Service website.

6 If it's your first time logging into **Embedded Web Service** you need to log-in as an administrator. Type in the below default **ID** and **Password**. We recommend you to change the default password for security reasons.

- **ID: admin**
- **Password: dell00000**



If the network environment is using a proxy server, you need to configure the proxy's IP and port number from **Settings > Network Settings > Google Cloud Print > Proxy Setting**. Contact your network service provider or network administrator for more information.

7 When the **Embedded Web Service** window opens, click **Settings > Network Settings > Google Cloud Print**.

8 Enter your printer's name and description.

9 Click **Register**.  
The confirmation pop-up window appears.



If you set the browser to block pop-ups, the confirmation window will not appear. Allow the site to show pop-ups.

# Google Cloud Print™

**10** Click **Finish printer registration**.

**11** Click **Manage your printers**.

Now your printer is registered with Google Cloud Print™ service.

Google Cloud Print™-ready devices will appear in the list.

## Printing with Google Cloud Print™

The printing procedure varies depending on the application or the device you are using. You can see the application list that supports Google Cloud Print™ service.



Make sure the printer is turned on and connected to a wired or wireless network that has access to the Internet.

To share your printer with your freinds, please refer to the following web site.  
<http://support.google.com/chromeos/bin/answer.py?hlen&answer1241064>

## Printing from an application on mobile device





The following steps are an example of using the Google Docs™ app from Android mobile phone.

**1** Install the Cloud Print application on your mobile device.



If you do not have the application, download it from the application store such as Android Market or App Store.


# Google Cloud Print™

- 2 Access the Google Docs™ application from your mobile device and tap on the  icon to select document.
- 3 Tap the option  button of the document that you want to print.
- 4 Tap the send  button.
- 5 Tap the Cloud Print  button.
- 6 Set the printing options if you want.
- 7 Tap **Click here to Print.**

## Printing from the Chrome browser

---

The following steps are an example of using the Chrome browser.

- 1 Run Chrome.
- 2 Open the document or email that you want to print.
- 3 Click the wrench icon  in the browser's top right corner.
- 4 Click **Print**. A new tab for printing appears.
- 5 Select **Print with Google Cloud Print.**
- 6 Click the **Print** button.

# Wireless network setup

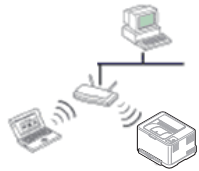


- Make sure your machine supports wireless networking. Wireless networking may not be available depending on the model (see "Features by models" on page 7).

## Getting started

### Understanding your network type

Typically, you can only have one connection between your computer and the machine at a time.



#### Infrastructure mode

This is an environment generally used for homes and SOHOs (Small Office/ Home Office). This mode uses an access point to communicate with the wireless machine.



#### Ad hoc mode

This mode does not use an access point. The wireless computer and wireless machine communicate directly.

### Wireless network name and network password

Wireless networks require higher security, so when an access point is first set up, a network name (SSID), the type of security used, and a Network Password are created for the network. Ask your network administrator about this information before proceeding with the machine installation.



# Wireless network setup

## Introducing wireless set up methods

You can set wireless settings either from the machine or the computer. Choose the setting method from the below table.



Some wireless network installation types may not be available depending on the model or country.


Set up method	Connecting method	Description & Reference
<b>With Access Point</b>	From the computer	Windows User, see "Dell Printer Easy Wi-Fi Install" on page 114.
		Windows User, see "Access point via USB cable in Windows" on page 117.
	Mac User, see "Access point via USB cable" on page 123.	
	From the machine's control panel	See "Using the WPS button" on page 110.
<b>Without Access Point</b>	From the computer	Windows User, see "Ad hoc via USB cable" on page 125.
		Mac User, see "Ad hoc via USB cable" on page 125.



- If problems occur during wireless set up or driver installation, refer to the troubleshooting chapter (see "Troubleshooting" on page 130).
- It is strongly recommended that you set the password on Access Points. If you do not set the password on Access Points, they might be exposed to illegal access from unknown machines including PCs, smart phones and printers. Refer to the Access Point user' guide for password settings.

# Wireless network setup

## Using the WPS button

If your machine and an access point (or wireless router) support Wi-Fi Protected Setup™ (WPS), you can easily configure the wireless network settings by pressing the  (WPS) button on the control panel without a computer.





- If you want to use the wireless network using the infrastructure mode, make sure that the network cable is disconnected from the machine. Using the **WPS (PBC)** button or entering the PIN from the computer to connect to the access point (or wireless router) varies depending on the access point (or wireless router) you are using. Refer to the user's guide of the access point (or wireless router) you are using.
- When using the WPS button to set the wireless network, security settings may change. To prevent this, lock the WPS option for the current wireless security settings. The option name may differ depending on the access point (or wireless router) you are using.

## Items to prepare

- Check if the access point (or wireless router) supports Wi-Fi Protected Setup™ (WPS).
- Check if your machine supports Wi-Fi Protected Setup™ (WPS).
- Networked computer (PIN mode only)

## Choosing your type

There are two methods available to connect your machine to a wireless network using the  (WPS) button on the control panel.

The **Push Button Configuration (PBC)** method allows you to connect your machine to a wireless network by pressing both the  (WPS) button on the control panel of your machine and the WPS (PBC) button on a Wi-Fi Protected Setup™ WPS-enabled access point (or wireless router) respectively.

The **Personal Identification Number (PIN)** method helps you connect your machine to a wireless network by entering the supplied PIN information on a Wi-Fi Protected Setup™ WPS-enabled access point (or wireless router).

Factory default in your machine is **PBC** mode, which is recommended for a typical wireless network environment.

# Wireless network setup

## Machines with a display screen

### Connecting in PBC mode

- 1 Press and hold the  (WPS) button on the control panel for more than 2 seconds.

The machine starts waiting for up to two minutes until you press the WPS (PBC) button on the access point (or wireless router).


- 2 Press the **WPS (PBC)** button on the access point (or wireless router).

The messages are displayed on the display screen in the order below:

- a **Connecting:** The machine is connecting to the access point (or wireless router).
- b **Connected:** When the machine is successfully connected to the wireless network, the WPS LED light stays on.
- c **AP SSID:** After completing the wireless network connection process, the AP's SSID information appears on the display.

- 3 Insert the supplied CD into the CD/DVD drive and proceed to install the software following the directions on the screen. When the "Connect Printer" screen appears, select the Network (Ethernet/Wireless) connection.

### Connecting in PIN mode

- 1 Press and hold the  (WPS) button on the control panel for more than 2 seconds.

- 2 The eight-digit PIN appears on the display.

You need to enter the eight-digit PIN within two minutes on the computer that is connected to the access point (or wireless router).

The messages are displayed on the display screen in the order below:


- a **Connecting:** The machine is connecting to the wireless network.
- b **Connected:** When the machine is successfully connected to the wireless network, the WPS LED light stays on.
- c **SSID Type:** After completing the wireless network connection process, the AP's SSID information is displayed on the LCD display.

- 3 Insert the supplied CD into the CD/DVD drive and proceed to install the software following the directions on the screen. When the "Connect Printer" screen appears, select Network (Ethernet/Wireless) connection.

# Wireless network setup

## Machines without a display screen



### Connecting in PBC mode

- 1 Press and hold the  (WPS) button on the control panel for about 2 - 4 seconds until the status LED blinks quickly.  

The machine starts connecting to the wireless network. The LED blinks slowly for up to two minutes until you press the PBC button on the access point (or wireless router).
- 2 Press the **WPS (PBC)** button on the access point (or wireless router).
  - a The light blinks fast on the WPS LED. The machine is connecting to the access point (or wireless router).
  - b When the machine is successfully connected to the wireless network, the WPS LED light stays on.
- 3 Insert the supplied CD into the CD/DVD drive and proceed to install the software following the directions on the screen. When the "Connect Printer" screen appears, select the Network (Ethernet/Wireless) connection.

### Connecting in PIN mode

- 1 The network configuration report, including PIN, must be printed.  

In ready mode, press and hold the  (**Cancel** or **Stop/Clear**) button on the control panel for about 5 seconds. You can find your machine's PIN.
- 2 Press and hold the  (WPS) button on the control panel for more than 4 seconds until the status LED stays on.  

The machine starts connecting to the access point (or wireless router).
- 3 You need to enter the eight-digit PIN within two minutes on the computer that is connected to the access point (or wireless router).  

The LED blinks slowly for up to two minutes until you enter the eight-digit PIN.

The WPS LED blinks in the order below:

  - a The light blinks fast on the WPS LED. The machine is connecting to the access point (or wireless router).
  - b When the machine is successfully connected to the wireless network, the WPS LED light stays on.
- 4 Insert the supplied CD into the CD/DVD drive and proceed to install the software following the directions on the screen. When the "Connect Printer" screen appears, select the Network (Ethernet/Wireless) connection.

# Wireless network setup

## Re-connecting to a network


When the wireless function is off, the machine automatically tries to re-connect to the access point (or wireless router) with the previously used wireless connection settings and address.




In the following cases, the machine automatically re-connects to the wireless network:

- The machine is turned off and on again.
- The access point (or wireless router) is turned off and on again.

## Canceling the connection process

To cancel the wireless network connection when the machine is connecting to the wireless network, press and release the  (**Cancel** or **Stop/Clear**) on the control panel. **You need to wait 2 minutes to re-connect to the wireless network.**

## Disconnecting from a network

To disconnect the wireless network connection, press the  (WPS) button on the control panel for more than two seconds.

- **When the Wi-Fi network is in idle mode:** The machine is immediately disconnected from the wireless network and the WPS LED turns off.
- **When the Wi-Fi network is being used:** While the machine waits until the current job is finished, the light blinks fast on the WPS LED. Then, the wireless network connection is automatically disconnected and the WPS LED turns off.

# Wireless network setup

## Setup using Windows

### Dell Printer Easy Wi-Fi Install

Before Using Dell Printer Easy Wi-Fi Install, please ensure that OS of your computer should be Windows 7 and above.

- Items to prepare
  - Access point
  - Wireless network-connected computer
  - Software CD that was provided with your machine



If any of the following conditions occur, you can not use **Dell Printer Easy Wi-Fi Install**. In that case, see "Access point via USB cable" on page 123 or "Ad hoc via USB cable" on page 125 .

- OS of your computer is Windows Vista or earlier.
- Your PC does not support wireless network.
- Your PC can not connect to wireless network.

**1** Turn on your computer, access point and machine.

**2** Connect your computer to the wireless network.

**3** Insert the supplied software CD into your CD/DVD drive.

The software CD should automatically run and an installation window will appear.

If the installation window does not appear, click **Start > All programs > Accessories > Run**.

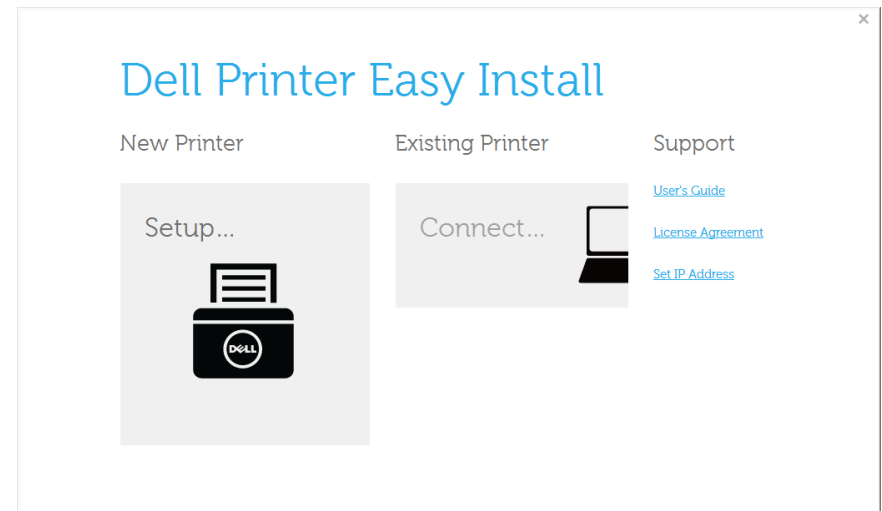
X:\Setup.exe replacing "X" with the letter, which represents your CD/DVD drive and click **OK**.

- For Windows 8,

If the installation window does not appear, from **Charms**, select **Search > Apps** and search for **Run**. Type in X:\Setup.exe, replacing "X" with the letter that represents your CD/DVD drive and click **OK**.

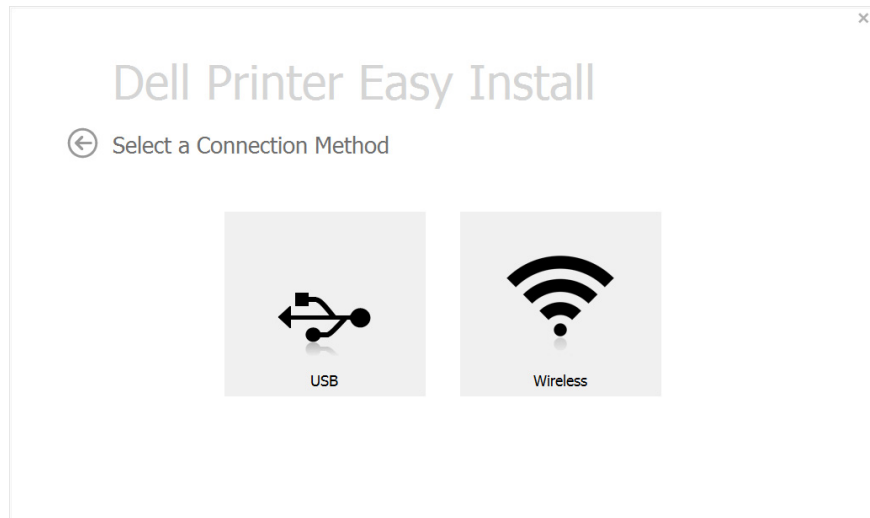
If "**Tap to choose what happens with this disc.**" pop-up window appears, click the window and select **Run Setup.exe**.

**4** Click **New Printer**.

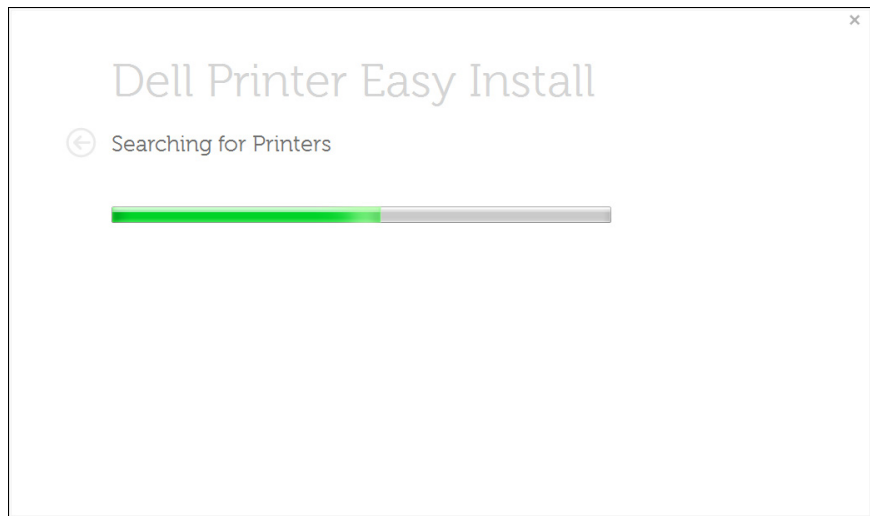


# Wireless network setup

- 5 Select **Wireless** and click **Next**.

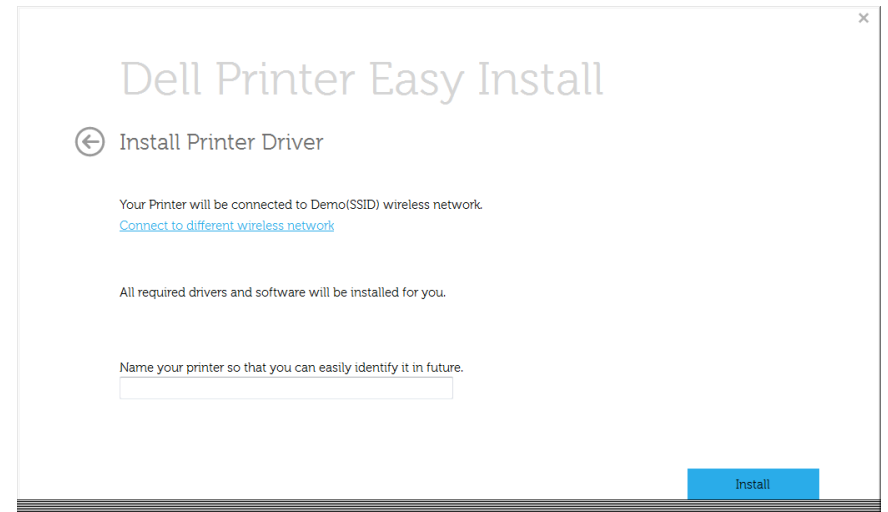


- 6 Setup searches for printers.



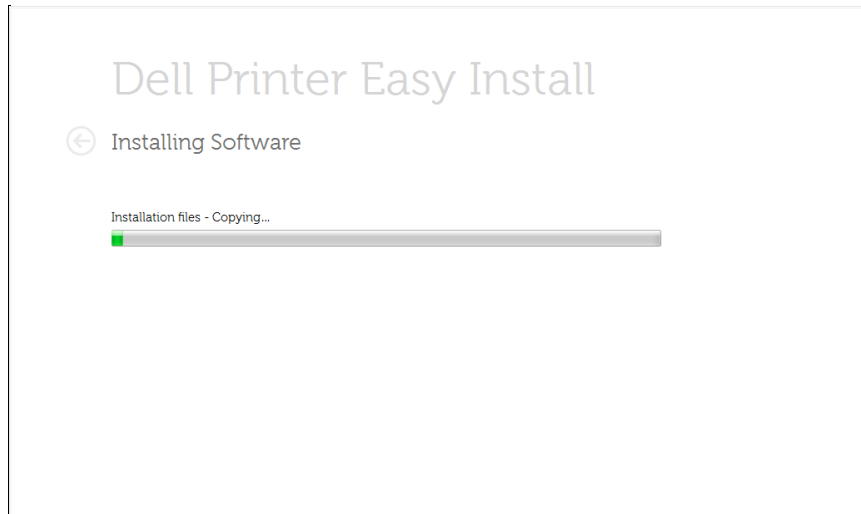
If the search has failed, a **Connecting the Device** window will be appeared. (see "Click Next." on page 118)

- 7 Set your printer name and click **Next**.



# Wireless network setup

- 8 Setup is installing printer software.



- 9 After the installation is finished, a window asking you to print a test page appears. If you want to print a test page, click **Print a test page**.

Otherwise, just click Next and go to step 10.

- 10 Click **Finish**.





# Wireless network setup

## Access point via USB cable in Windows

If you can not use **Dell Printer Easy Wi-Fi Install**, you may still connect the machine wirelessly to your computer using USB cable by following steps below.

- Items to prepare
  - Access point
  - Network-connected computer
  - Software CD that was provided with your machine
  - The machine installed with a wireless network interface
  - USB cable



If any of the following conditions occur, you have to setup Wi-Fi installation using a USB cable.

- OS of your computer is Windows Vista or earlier.
- Your PC does not support wireless network.
- Your PC can not connect to wireless network.

**1** Check whether the USB cable is connected to the machine.

**2** Turn on your computer, access point, and machine.



If the “**Found New Hardware Wizard**” appears during the installation procedure, click **Cancel** to close the window.

**3** Insert the supplied software CD into your CD/DVD drive.

The software CD should automatically run and an installation window will appear.

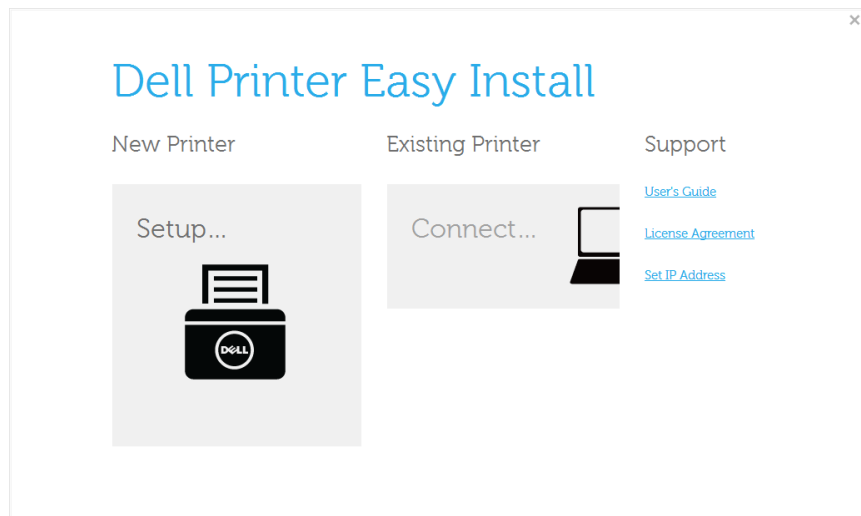
If the installation window does not appear, click **Start > All programs > Accessories > Run**.

X:\**Setup.exe** replacing “X” with the letter, which represents your CD/DVD drive and click **OK**.

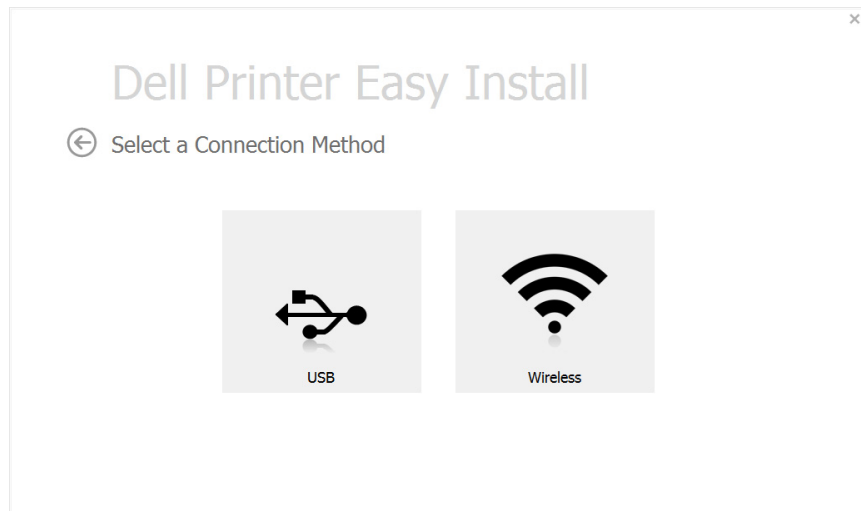
- For Windows 8,
  - a** If the installation window does not appear, from **Charms**, select **Search > Apps** and search for **Run**.
  - b** Type in X:\Setup.exe, replacing “X” with the letter that represents your CD/DVD drive and click **OK**.
  - c** If “**Tap to choose what happens with this disc.**” pop-up window appears, click the window and select **Run Setup.exe**.

# Wireless network setup

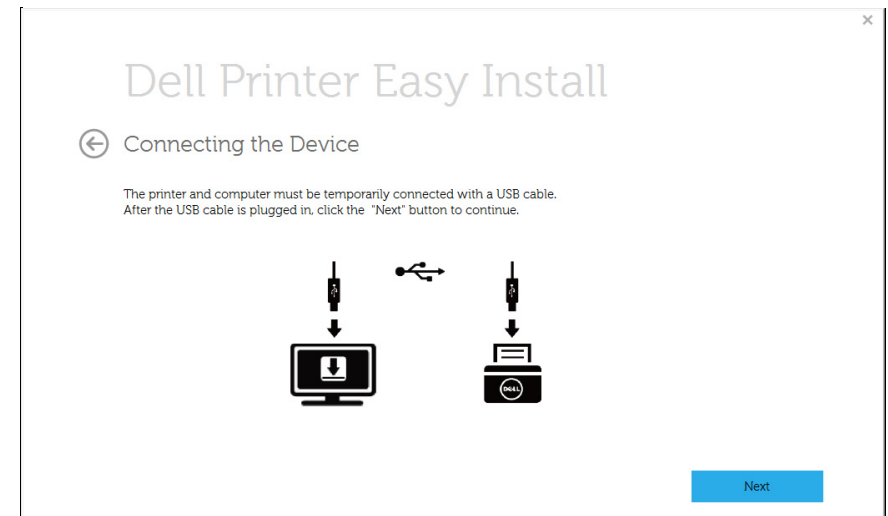
4 Click **New Printer**.



5 Choose **Wireless**.



6 Click **Next**.



7 The Setup searches the wireless network.




If the search has failed, you may check if the USB cable is properly connected between the computer and machine, and follow the instructions on the window.

# Wireless network setup

- 8 After searching, the window shows the wireless network devices. Select the name (SSID) of the access point you are using and click **Next**.



If you cannot find the network name you want to choose, or if you want to set the wireless configuration manually, click  (**Plus**) button.

- **Enter the wireless Network Name:** Enter the SSID of access point you want (SSID is case-sensitive).
- **Operation Mode:** Select **Infrastructure**.
- **Authentication:** Select an authentication type.
  - Open System:** Authentication is not used, and encryption may or may not be used, depending on the need for data security.
  - Shared Key:** Authentication is used. A device that has a proper WEP key can access the network.
  - WPA Personal or WPA2 Personal:** Select this option to authenticate the print server based on WPA Pre-Shared Key. This uses a shared secret key (generally called Pre- Shared Key pass phrase) which is manually configured on the access point and each of its clients.
- **Encryption:** Select the encryption (None, WEP64, WEP128, TKIP, AES, TKIP AES).
- **Network Key:** Enter the encryption network key value.
- **Confirm Network Key:** Confirm the encryption network key value.
- **WEP Key Index:** If you are using WEP Encryption, select the appropriate **WEP Key Index**.



The wireless network security window appears when the access point has security settings.

The wireless network security window appears. The window may differ according to its security mode: WEP, or WPA.

- **WEP**
  - Select **Open System** or **Shared Key** for the authentication and enter the WEP security key. Click **Next**.
  - WEP (Wired Equivalent Privacy) is a security protocol preventing unauthorized access to your wireless network. WEP encrypts the data portion of each packet exchanged on a wireless network using a 64-bit or 128-bit WEP encryption key.
- **WPA**
  - Enter the WPA shared key and click **Next**.
  - WPA authorizes and identifies users based on a secret key that changes automatically at regular intervals. WPA also uses TKIP (Temporal Key Integrity Protocol) and AES (Advanced Encryption Standard) for data encryption.

# Wireless network setup

- 9 When the wireless network setting is completed, disconnect the USB cable between the computer and machine. Click **Next**.
- 10 Click **Next** when the **Install Printer Driver** window appear.
- 11 After the installation is finished, a window asking you to print a test page appears. If you want to print a test page, click **Print a test page**.  
Otherwise, just click **Next** and go to step 16.
- 12 If the test page prints out correctly, click **Yes**.  
If not, click **No** to reprint it.
- 13 Click **Finish**.

## Ad hoc via USB cable in Windows

If you do not use an access point (AP), you may still connect the machine wirelessly to your computer by setting up an ad-hoc wireless network by following the simple steps below.

- Items to prepare
  - Network-connected computer
  - Software CD that was provided with your machine
  - The machine installed with a wireless network interface
  - USB cable



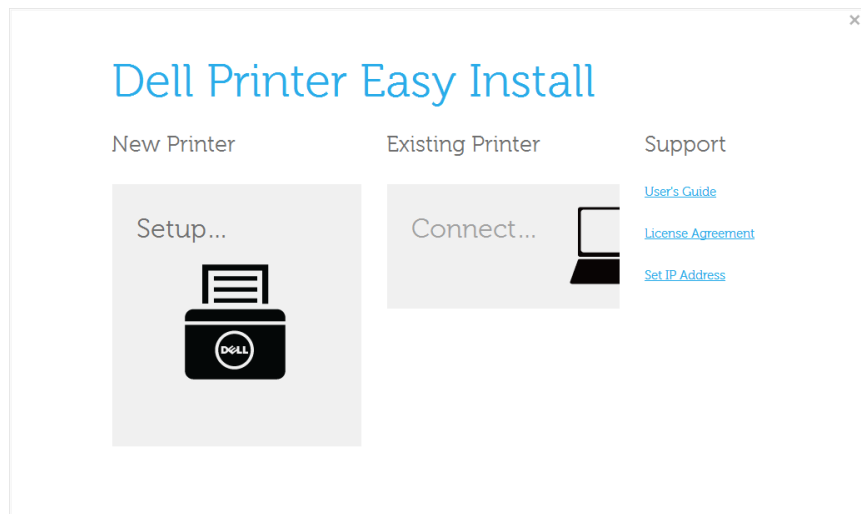
If any of the following conditions occur, you have to setup Wi-Fi installation using a USB cable.

- OS of your computer is Windows Vista or earlier.
- Your PC does not support wireless network.
- Your PC can not connect to wireless network.

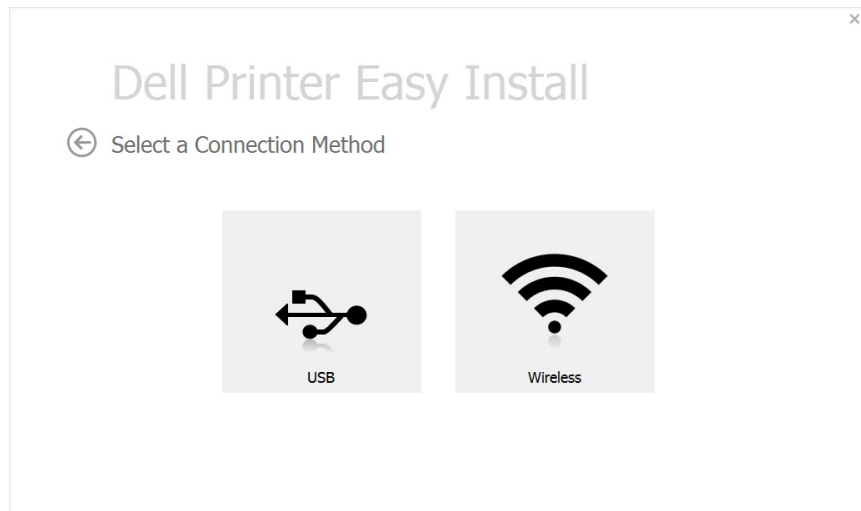
- 1 Check whether the USB cable is connected to the machine.
- 2 Turn on your computer and the wireless network machine.
- 3 Insert the supplied software CD into your CD/DVD drive.  
The software CD should automatically run and an installation window will appear.  
If the installation window does not appear, click **Start > All programs > Accessories > Run**.  
X:\**Setup.exe** replacing "X" with the letter, which represents your CD/DVD drive and click **OK**.

# Wireless network setup

## 4 Select **New Printer**.



## 5 Select **Wireless**.



## 6 The software searches the wireless network.



If the software has failed to search the network, check if the USB cable is connected properly between the computer and machine, and follow the instruction in the window.

## 7 After searching the wireless networks, a list of wireless networks your machine has searched appears.

Then, click **+** (**Plus**) button.

## 8 The window showing the wireless network setting appears. Check the settings and click **Next**.



- **Enter the wireless Network Name:** Enter the SSID name you want (SSID is case-sensitive).
- **Operation Mode:** Select ad hoc.
- **Channel:** Select the channel. (**Auto Setting** or 2412 MHz to 2467 MHz).
- **Authentication:** Select an authentication type.
  - Open System:** Authentication is not used, and encryption may or may not be used, depending on the need for data security.
  - Shared Key:** Authentication is used. A device that has a proper WEP key can access the network.
- **Encryption:** Select the encryption (None, WEP64, WEP128).
- **Network Key:** Enter the encryption network key value.

# Wireless network setup

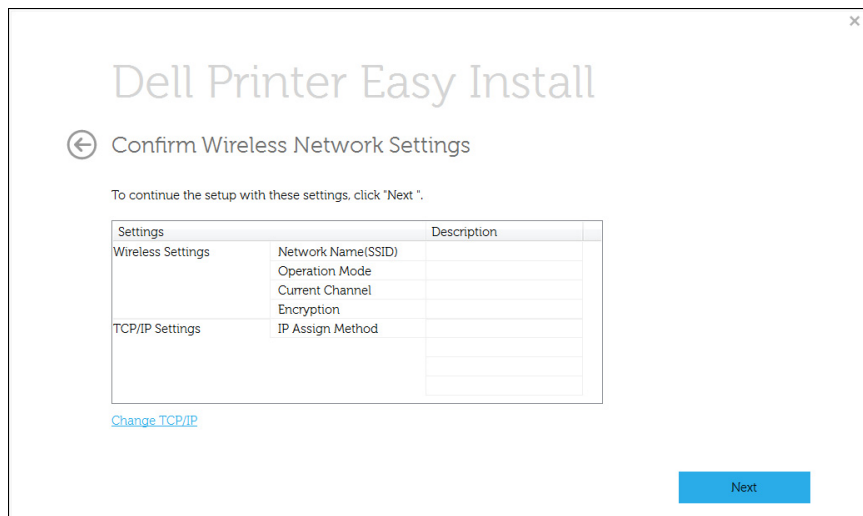
- **Confirm Network Key:** Confirm the encryption network key value.
- **WEP Key Index:** If you are using WEP Encryption, select the appropriate **WEP Key Index**.

The wireless network security window appears when the ad hoc network has security setting.

The wireless network security window appears. Select **Open System** or **Shared Key** for the authentication and click **Next**.

- WEP (Wired Equivalent Privacy) is a security protocol preventing unauthorized access to your wireless network. WEP encrypts the data portion of each packet exchanged on a wireless network using a 64-bit or 128-bit WEP encryption key.

- 9 The **Confirm Wireless Network Settings** window appears. Click the settings and click **Next**.



If you want to change TCP/IP settings, click **Change TCP/IP**

Before entering the IP address for the machine, you must know the computer's network configuration information. If the computer's network configuration is set to DHCP, the wireless network setting should also be DHCP. Likewise, if the computer's network configuration is set to Static, the wireless network setting should also be Static.

If your computer is set to DHCP and you want to use the Static wireless network setting, you must contact the network administrator to get the static IP address.

- **Receive IP address automatically (DHCP)**

If the IP address assignment method is DHCP, check if DHCP is shown in the **Confirm Wireless Network Settings** window. If it shows Static, click **Change TCP/IP** to change the assignment method to **Receive IP address automatically (DHCP)**.

- **Use static address**

If the IP address assignment method is Static, check if Static is shown in the **Confirm Wireless Network Settings** window. If it shows DHCP, click **Change TCP/IP** to enter the IP address and other network configuration values for the machine.

For example:

If the computer's network information is as shown follows:

- IP address: 169.254.133.42
- Subnet Mask: 255.255.0.0

Then, the machine's network information should be as below:

- IP address: 169.254.133.43
- Subnet Mask: 255.255.0.0 (Use the computer's subnet mask.)
- Gateway: 169.254.133.1

# Wireless network setup

- 10 When the wireless network settings are completed, disconnect the USB cable between the computer and machine. Click **Next**.
- 11 Click **Next** when the **Install Printer Driver** window appears.
- 12 Select the components to be installed. Click **Next**.
- 13 After selecting the components, you can also change the machine name, set the machine to be shared on the network, set the machine as the default machine, and change the port name of each machine. Click **Next**.
- 14 After the installation is finished, a window asking you to print a test page appears. If you want to print a test page, click **Print a test page**.  
Otherwise, just click **Next** and go to step 16.
- 15 If the test page prints out correctly, click **Yes**.  
If not, click **No** to reprint it.
- 16 Click **Finish**.

## Setup using Mac

### Items to prepare

---

- Access point
- Network-connected computer
- Software CD that was provided with your machine
- A machine installed with a wireless network interface
- USB cable

### Access point via USB cable

---

- 1 Connect your machine to the network with a network cable.
- 2 Insert the supplied software CD into your CD/DVD drive.
- 3 Double-click the CD/DVD icon that appears on your Mac desktop.
  - For Mac OS X 10.8, Double-click the CD/DVD icon that appears on your **Finder**.
- 4 Double-click the **MAC\_Installer** folder > **Installer OS X** icon.
- 5 Click **Continue**.

# Wireless network setup

- 6 Read the license agreement and click **Continue**.
- 7 Click **Agree** to agree to the license agreement.
- 8 Click **Install**. All components necessary for machine operations will be installed.  
If you click **Customize**, you can choose individual components to install.
- 9 Enter the password and click **OK**.
- 10 Select **Configuration of Wireless** network on the **Printer Connection Type** and click **Continue**.
- 11 After searching, the window shows the wireless network devices. Select the name (SSID) of the access point you are using and click **Next**.



When you set the wireless configuration manually, click **Advanced Setting**.

- **Enter the wireless Network Name:** Enter the SSID of the access point (SSID is case-sensitive).
- **Operation Mode:** Select **Infrastructure**.
- **Authentication:** Select an authentication type.  
**Open System:** Authentication is not used, and encryption may or may not be used, depending on the need for data security.  
**Shared Key:** Authentication is used. A device that has a proper WEP key can access the network.  
**WPA Personal or WPA2 Personal:** Select this option to authenticate the print server based on the WPA Pre-Shared Key. This uses a shared secret key (generally called Pre Shared Key pass phrase) that is manually configured on the access point and each of its clients.

- **Encryption:** Select the encryption. (None, WEP64, WEP128, TKIP, AES, TKIP, AES)
- **Network Password:** Enter the encryption Network Password value.
- **Confirm Network Password:** Confirm the encryption Network Password value.
- **WEP Key Index:** If you are using WEP Encryption, select the appropriate **WEP Key Index**.

The wireless network security window appears when the access point has security enabled.



- You can start to build Wi-Fi Direct by using Dell Printer Manager (see "Setting up Wi-Fi Direct" on page 128).
- **Network Name(SSID):** The default Network Name is the model name and the maximum length is 22 characters (not including "Direct-xx-").
- **Network Password** is the numeric string, and the size is 8 ~ 64 characters.

- 12 When the wireless network settings are completed, disconnect the USB cable between the computer and machine.
- 13 Wireless network set up is completed. After the installation is finished, click **Quit**.



# Wireless network setup



After completing the wireless network connection, you need to install a machine driver to print from an application (see "Installation for Mac" on page 97).

## Ad hoc via USB cable

If you do not have an access point (AP), you may still connect the machine wirelessly to your computer by setting up an ad hoc wireless network by following these simple directions.

### Items to prepare

- Network-connected computer
- Software CD that was provided with your machine
- A machine installed with a wireless network interface
- USB cable

### Creating the ad hoc network in Mac

- 1** Make sure that the machine is connected to your network and powered on.
- 2** Insert the supplied software CD into your CD/DVD drive.

- 3** Double-click the CD/DVD icon that appears on your Mac desktop.
  - For Mac OS X 10.8, Double-click the CD/DVD icon that appears on your Finder.
- 4** Double-click the **MAC\_Installer** folder > **Installer OS X** icon.
- 5** Click **Continue**.
- 6** Read the license agreement and click **Continue**.
- 7** Click **Agree** to agree to the license agreement.
- 8** Click **Install**. All components necessary for machine operations will be installed.  
If you click **Customize**, you can choose individual components to install.
- 9** Enter the password and click **OK**.
- 10** Select **Wireless connection** on the **Printer Connection Type** and click **Continue**.
- 11** After searching the wireless networks, a list of wireless networks your machine has searched appears. Click the **Advanced Settings** button.

# Wireless network setup



- **Enter the wireless Network Name:** Enter the SSID name (SSID is case-sensitive).
- **Operation Mode:** Select ad hoc.
- **Channel:** Select the channel (**Auto Setting** or 2412 MHz to 2467 MHz).
- **Authentication:** Select an authentication type.
  - Open System:** Authentication is not used, and encryption may or may not be used, depending on the need for data security.
  - Shared Key:** Authentication is used. A device that has a proper WEP key can access the network.
- **Encryption:** Select the encryption (None, WEP64, WEP128).
- **Network Password:** Enter the encryption Network Password value.
- **Confirm Network Password:** Confirm the encryption Network Password value.
- **WEP Key Index:** If you are using WEP Encryption, select the appropriate **WEP Key Index**.

The wireless network security window appears when the ad hoc network has security setting.

Select **Open System** or **Shared Key** for the authentication and click **Next**.

- WEP (Wired Equivalent Privacy) is a security protocol preventing unauthorized access to your wireless network. WEP encrypts the data portion of each packet exchanged on a wireless network using a 64-bit or 128-bit WEP encryption key.

- 12** The window showing the wireless network settings appears. Check the settings and click **Next**.



Before entering the IP address for the machine, you must know the computer's network configuration information. If the computer's network configuration is set to DHCP, the wireless network setting should also be DHCP. Likewise, if the computer's network configuration is set to Static, the wireless network setting should also be Static.

If your computer is set to DHCP and you want to use Static wireless network setting, you must contact the network administrator to get the static IP address.

- **For the DHCP method**

If the IP address assignment method is DHCP, check if DHCP is shown in the **Confirm Wireless Network Settings** window. If it shows Static, click **Change TCP/IP** to change the assignment method to **Receive IP address automatically (DHCP)**.

- **For the Static method**

If the IP address assignment method is Static, check if Static is shown in the **Confirm Wireless Network Settings** window. If it shows DHCP, click **Change TCP/IP** to enter the IP address and other network configuration values for the machine.

For example,

If the computer's network information is shown as follows:

- IP address: 169.254.133.42
- Subnet Mask: 255.255.0.0

Then, the machine's network information should be as shown below:

- IP address: 169.254.133.**43**
- Subnet Mask: 255.255.0.0 (Use the computer's subnet mask.)
- Gateway: 169.254.133.**1**

# Wireless network setup

**13** When the window that tells you that the network cable connection is confirmed appears, disconnect the network cable and click **Next**.

If the network cable is connected, it may have trouble finding the machine when configuring the wireless network.

**14** The wireless network connects according to the network configuration.

**15** Wireless network set up is completed. After installation is finished, click **Quit**.



After completing the wireless network connection, you need to install a machine driver to print from an application (see "Installation for Mac" on page 97).

## Setting the Wi-Fi Direct for mobile printing

Wi-Fi Direct is an easy-to-setup peer-to-peer connecting between method for your between a printer and mobile device that supports Wi-Fi Direct that provides a secure connection and better throughput than ad hoc mode.

With Wi-Fi Direct, you can connect your printer to a Wi-Fi Direct network while concurrently connecting to an access point, You can also use a wired network and a Wi-Fi Direct network simultaneously so multiple users can access and print documents both from Wi-Fi Direct and from a wired network.



- You cannot connect to the internet through the mobile device in use Wi-Fi Direct.
- The supported protocol list may differ from your model, Wi-Fi Direct networks do NOT support IPv6, network filtering, IPSec, WINS, and SLP services.
- Up to four mobile devices can connect to Wi-Fi Direct at one time.

# Wireless network setup

## Setting up Wi-Fi Direct

You can enable Wi-Fi Direct feature by one of the following methods.

### From the USB cable-connected computer(recommended)

- After the driver installation is complete, open Dell Printer Manager and make changes for the Wi-Fi Direct setting.



Dell Printer Manager is available for Windows and Mac OS users only.

- From the **Start** menu, select **Programs** or **All Programs > Dell Printers > your printer driver name > Dell Printer Manager > Device Settings > Network**.
  - **Wi-Fi Direct On/Off:** Select **On** to enable.
  - **Device Name:** Enter the printer's name for searching for your printer on a wireless network. By default, the device name is the model name.
  - **IP Address:** Enter the IP address of the printer. This IP address is used only for the local network and not for the infrastructure wired or wireless network. We recommend using the default local IP address (the default local IP address of the printer for Wi-Fi Direct is 192.168.3.1 )
  - **Group Owner:** Activate this option to assign the printer the Wi-Fi Direct group's owner. The **Group Owner** acts similar to a wireless access point. We recommend activating this option.

- **Network Password:** If your printer is a **Group Owner**, a **Network Password** is required for other mobile devices to connect to your printer. You can configure a Network Password yourself, or can remember the given Network Password that is randomly generated by default.

### From the machine (Machines with a display screen)

- Select **Network > Wireless > Wi-Fi Direct** from the control panel.
- Enable **Wi-Fi Direct**.

## Setting up the mobile device

- After setting up Wi-Fi Direct from the printer, refer to the user manual of the mobile device you are using to set its Wi-Fi Direct.
- After setting up Wi-Fi Direct, you need to download the mobile printing application (For example: Dell Mobile print) to print from your smartphone.



- When you have found the printer you want to connect to from your mobile device, select the printer and the printer's LED will blink. Press the WPS button on the printer and it will be connected to your mobile device.
- If your mobile device does not support WPS, you need to enter the "Network Password" of a printer instead of pushing the WPS button.

# Wireless network setup

## What is Dell MobilePrint?

**Dell MobilePrint** is a free application that enables users to print photos, documents, and web pages directly from a smartphone or tablet. **Dell MobilePrint** is not only compatible with your Android, Windows and iOS smart phones but also with your iPod Touch and tablet PC. This program allows your mobile device to connect to a Dell printer over a wired network or a Wi-Fi access point. Installing a new driver or configuring network settings isn't necessary – just simply install the **Dell MobilePrint** application, and it will automatically detect compatible Dell printers. Besides printing photos, web pages, and PDFs, scanning is also supported. If you have Dell multifunction printer, scan any document into a JPG, PDF, or PNG format for quick and easy viewing on your mobile device.

## Downloading Dell MobilePrint

To download **Dell MobilePrint**, go to the application store (Dell Apps, Android Market, Play Store, Marketplace) on your mobile device, and just search for "**Dell MobilePrint**." You can also visit iTunes for Apple devices or Marketplace for Windows devices on your computer.

## Supported Mobile OS

- Android OS 2.1 or higher
- iOS 4.0 or higher
- Windows Phone 7 or higher

## Supported devices

- **iOS 4.0 or higher:** iPod Touch, iPhone, iPad
- **Android 2.1 or higher:** Galaxy S, Galaxy S2, Galaxy Tab, and Android mobile devices
- **Windows Phone 7 or higher:** Dell Focus, Omnia7, and OmniaW, and Windows mobile devices

# Wireless network setup

## Troubleshooting

### Problems during setup or driver installation

---

#### Printers Not Found

- Your machine may not be turned on. Turn on your computer and the machine.
- USB cable is not connected between your computer and machine. Connect the machine to your computer using the USB cable.
- The machine does not support wireless networking. Check the machine's user's guide included on the software CD supplied with your machine and prepare a wireless network machine.

#### Connecting Failure - SSID Not Found

- The machine is unable to find the network name (SSID) you have selected or entered. Check the network name (SSID) on your access point and try connecting again.
- Your access point is not turned on. Turn on your access point.

#### Connecting Failure - Invalid Security

- Security is not configured correctly. Check the configured security on your access point and machine.

#### Connecting Failure - General Connection Error

- Your computer is not receiving a signal from your machine. Check the USB cable and your machine's power.

#### Connecting Failure - Connected Wired Network

- Your machine is connected with a wired network cable. Remove the wired network cable from your machine.

#### PC Connection Error

- The configured network address is unable to connect between your computer and machine.
  - For a DHCP network environment  
The receives the IP address automatically (DHCP) when computer is configured to DHCP.
  - For a Static network environment  
The machine uses the static address when the computer is configured to static address.  
For example,  
If the computer's network information is as shown below:

# Wireless network setup

- IP address: 169.254.133.42
- Subnet Mask: 255.255.0.0

Then the machine's network information should be as below:

- IP address: 169.254.133.**43**
- Subnet Mask: 255.255.0.0 (Use the computer's subnet mask.)
- Gateway: 169.254.133.**1**

## Other problems

If problems occur while using the machine on a network, check the following:



For information on the access point (or wireless router), refer to its own user's guide.

- Your computer, access point (or wireless router), or machine may not be turned on.
- Check the wireless reception around the machine. If the router is far from the machine or there is an obstacle, you might have difficulty receiving the signal.
- Cycle the power for the access point (or wireless router), machine, and computer. Sometimes cycling the power can recover network communication.

- Check whether firewall software (V3 or Norton) is blocking the communication.

If the computer and the machine are connected on the same network and it cannot be found when searching, firewall software might be blocking the communication. Refer to the user's guide for the software to turn it off and try searching for the machine again.

- Check whether the machine's IP address is allocated correctly. You can check the IP address by printing the network configuration report.
- Check whether the access point (or wireless router) has a configured security (password). If it has a password, refer to the access point (or wireless router) administrator.
- Check the machine's IP address. Reinstall the machine driver and change the settings to connect to the machine on the network. Due to the characteristics of DHCP, the allocated IP address could change if the machine is not used for a long time or if the access point has been reset.

Register the product's MAC address when you configure the DHCP server on the access point (or wireless router). Then you can always use the IP address that is set with the MAC address. You can identify the Mac address of your machine by printing a network configuration report.

- Check the wireless environment. You might not be able to connect to the network in the infrastructure environment where you need to type in a user's information before connecting to the access point (or wireless router).
- This machine only supports IEEE 802.11 b/g/n and Wi-Fi. Other wireless communication types (e.g., Bluetooth) are not supported.

# Wireless network setup

- When using the ad hoc mode, in operating systems such as Windows Vista, you might need to set the wireless connection setting every time you use the wireless machine.
- You cannot use infrastructure mode and ad hoc mode at the same time for Dell wireless network machines.
- The machine is within the range of the wireless network.
- The machine is located away from obstacles that could block the wireless signal.

Remove any large metal objects between the access point (or wireless router) and the machine.

Make sure the machine and wireless access point (or wireless router) are not separated by poles, walls, or support columns containing metal or concrete.

- The machine is located away from other electronic devices that may interfere with the wireless signal.

Many devices can interfere with the wireless signal, including a microwave oven and some Bluetooth devices.

- Whenever the configuration of your access point (or wireless router) changes, you must do the product's wireless network setup again.
- If Wi-Fi Direct is ON, this machine only supports IEEE 802.11 b/g.
- If the access point is set to work with the 802.11n standard only, it may not connect to your machine.





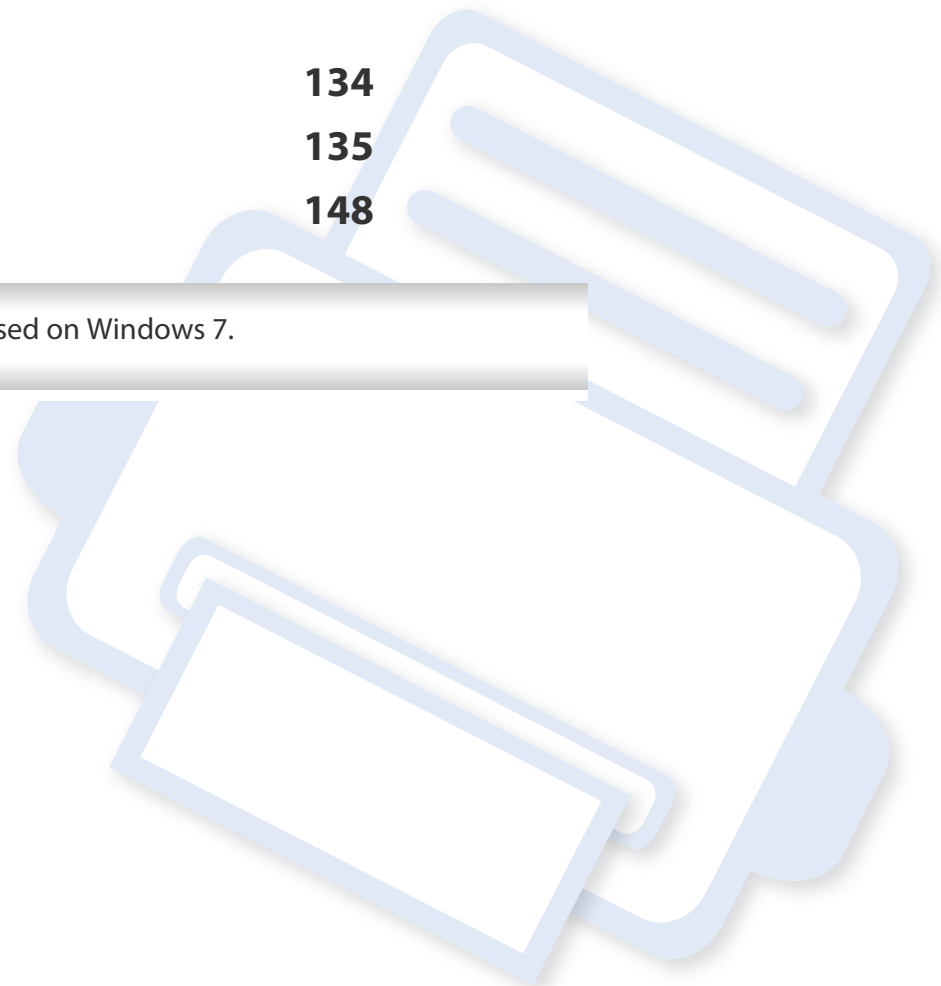
# 3. Special Features

This chapter explains special copying, scanning and printing features.

- **Altitude adjustment** 134
- **Printing features** 135
- **Scan features** 148



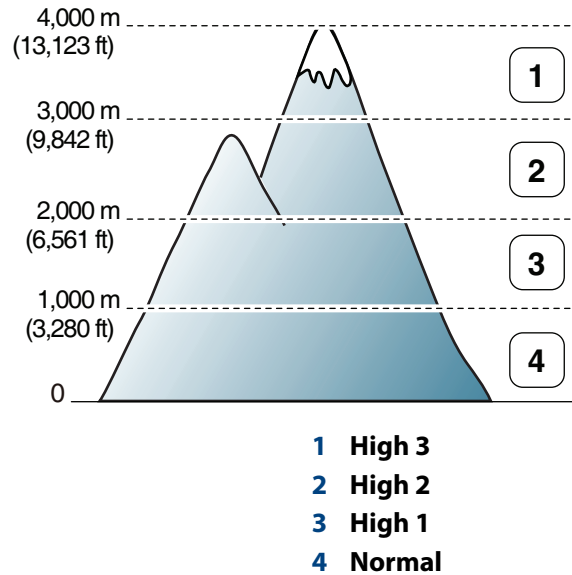
• The procedures in this chapter are mainly based on Windows 7.



# Altitude adjustment

Print quality is affected by atmospheric pressure, which is determined by the height of the machine above sea level. The following information will guide you on how to set your machine for the best print quality.

Before you set the altitude value, determine the altitude where you are.



You can set the altitude value from **Device Settings** in Dell Printer Manager program.

- For Windows and Mac users, see "Device Settings" on page 162.



- You can also set the altitude in **System Setup** option on the machine's display.

# Printing features



- For basic printing features, refer to the Basic Guide (see "Basic printing" on page 36).
- This feature may not be available depending on model or optional goods (see "Features by models" on page 7).

## Changing the default print settings

- 1 Click the Windows **Start** menu.
- 2 Select **Control Panel > Devices and Printers**.
- 3 Right-click on your machine.
- 4 Select **Printing preferences**.



If **Printing preferences** has a ►, you can select other printer drivers connected to the selected printer.

- 5 Change the settings on each tab.
- 6 Click **OK**.



If you want to change the settings for each print job, change it in **Printing Preferences**.

## Setting your machine as a default machine

- 1 Click the Windows **Start** menu.
- 2 Select **Control Panel > Devices and Printers**.
- 3 Select your machine.
- 4 Right-click your machine and select **Set as Default Printer**.



If **Printing preferences** has a ►, you can select other printer drivers connected to the selected printer.

# Printing features

## Using advanced print features



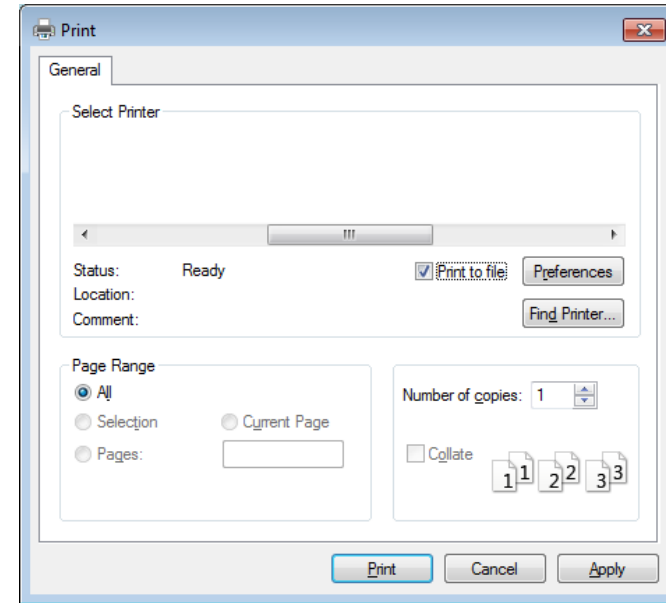
**XPS printer driver:** used to print XPS file format.

- See "Features by models" on page 7.
- The XPS printer driver can be installed only on Windows Vista OS or higher.
- Install optional memory when an XPS job does not print because the printer is out of memory.
- For models that provide XPS driver on the software CD:
  - You can install the XPS printer driver when you insert the software CD into your CD/DVD drive.

## Printing to a file (PRN)

You will sometimes need to save the print data as a file.

- 1 Check the **Print to file** box in the **Print** window.



- 2 Click **Print**.
- 3 Type in the destination path and the file name, and then click **OK**.  
For example, **c:\Temp\file name**.



If you type in only the file name, the file is automatically saved in **My Documents**, **Documents and Settings**, or **Users**. The saved folder may differ, depending on your operating system or the application you are using.


# Printing features


## Understanding special printer features

You can use advanced printing features when using your machine.

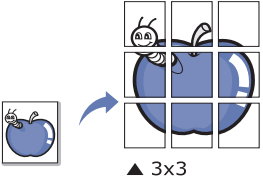
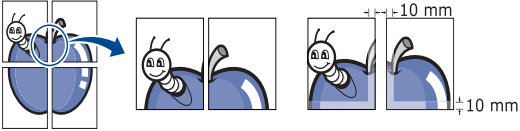
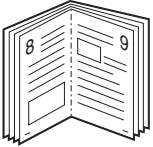


To take advantage of the printer features provided by your printer driver, click **Properties** or **Preferences** in the application's **Print** window to change the print settings. The machine name, that appears in the printer properties window may differ depending on the machine in use.




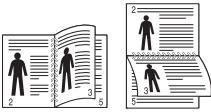
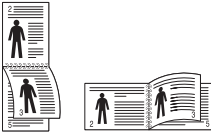
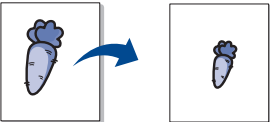
- Some menus may not appear on the display depending on options or models. If so, it is not applicable to your machine.
- Select the **Help** menu or click the  button from the window or press **F1** on your keyboard and click on any option you want to know about (see "Using help" on page 39).

Item	Description
<p data-bbox="51 815 315 887"><b>Multiple Pages per Side</b></p> 	<p data-bbox="383 815 2175 887">Selects the number of pages to print on a single sheet of paper. To print more than one page per sheet, the pages will be reduced in size and arranged in the order you specify. You can print up to 16 pages on one sheet.</p>


# Printing features

Item	Description
<p><b>Poster Printing</b></p> 	<p>Prints a single-page document onto 4 (Poster 2x2), 9 (Poster 3x3), or 16 (Poster 4x4) sheets of paper, for the purpose of pasting the sheets together to form one poster-size document.</p> <p>Select the <b>Poster Overlap</b> value. Specify <b>Poster Overlap</b> in millimeters or inches by selecting the radio button on the upper right of <b>Basic</b> tab to make it easier to paste the sheets together.</p> 
<p><b>Booklet Printing<sup>a</sup></b></p> 	<p>Prints your document on both sides of a sheet of paper and arranges the pages so that the paper can be folded in half after printing to produce a booklet.</p> <ul style="list-style-type: none"><li>• If you want to make a booklet, you need to print on Letter, Legal, A4, US Folio, or Oficio sized print media.</li><li>• The <b>Booklet Printing</b> option is not available for all paper sizes. Select the available paper <b>Size</b> option under the <b>Paper</b> tab to see what paper sizes are available.</li><li>• If you select an unavailable paper size, this option can be automatically canceled. Select only available paper (paper without  or  mark).</li></ul>
<ul style="list-style-type: none"><li>• <b>Double-sided Printing</b></li><li>• <b>Double-sided Printing (Manual)<sup>a</sup></b></li></ul>	<p>Print on both sides of a sheet of paper (duplex). Before printing, decide how you want your document oriented.</p> <ul style="list-style-type: none"><li>• You can use this feature with Letter, Legal, A4, US Folio or Oficio sized paper</li><li>• If your machine does not have a duplex unit, you should complete the printing job manually. The machine prints every other page of the document first. After that, a message appears on your computer.</li><li>• <b>Skip Blank Pages</b> feature does not work when you select the duplex option.</li></ul>

# Printing features

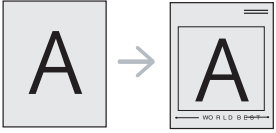

Item	Description
<ul style="list-style-type: none"><li>• <b>Double-sided Printing</b></li><li>• <b>Double-sided Printing (Manual)</b><sup>a</sup></li></ul>	<p data-bbox="398 284 2197 395"> Some menus may not appear on the display depending on options or models. If so, it is not applicable to your machine.</p> <ul style="list-style-type: none"><li>• <b>Printer Default:</b> If you select this option, this feature is determined by the settings you have selected on the control panel of the machine. This option is available only when you use the PCL/XPS printer driver.</li><li>• <b>None:</b> Disables this feature.</li><li>• <b>Long Edge:</b> This option is the conventional layout used in bookbinding. </li><li>• <b>Short Edge:</b> This option is the conventional layout used in calendars. </li><li>• <b>Reverse Double-Sided Printing:</b> Check this option to reverse the print order when duplex printing. This option is not available when you use <b>Double-sided Printing (Manual)</b>.</li></ul>
<p data-bbox="53 1082 250 1114"><b>Paper Options</b></p> 	<p data-bbox="380 1082 2195 1152">Changes the size of a document to appear larger or smaller on the printed page by entering in a percentage by which to enlarge or decrease the document.</p>

# Printing features

Item	Description
<b>Watermark</b> 	The watermark option allows you to print text over an existing document. For example, you use it when you want to have large gray letters reading <b>"DRAFT"</b> or <b>"CONFIDENTIAL"</b> printed diagonally across the first page or all pages of a document.
<b>Watermark (Creating a watermark)</b>	<ul style="list-style-type: none"><li><b>a</b> To change the print settings from your software application, access <b>Printing Preferences</b>.</li><li><b>b</b> Click the <b>Advanced</b> tab, select <b>Edit</b> from the <b>Watermark</b> drop-down list. The <b>Edit Watermarks</b> window appears.</li><li><b>c</b> Enter a text message in the <b>Watermark Message</b> box. You can enter up to 256 characters. The message displays in the preview window.</li></ul>
<b>Watermark (Editing a watermark)</b>	<ul style="list-style-type: none"><li><b>a</b> To change the print settings from your software application, access <b>Printing Preferences</b>.</li><li><b>b</b> Click the <b>Advanced</b> tab, select <b>Edit</b> from the <b>Watermark</b> drop-down list. The <b>Edit Watermarks</b> window appears.</li><li><b>c</b> Select the watermark you want to edit from the <b>Current Watermarks</b> list and change the watermark message and options.</li><li><b>d</b> Click <b>Update</b> to save the changes.</li><li><b>e</b> Click <b>OK</b> or <b>Print</b> until you exit the <b>Print</b> window.</li></ul>
<b>Watermark (Deleting a watermark)</b>	<ul style="list-style-type: none"><li><b>a</b> To change the print settings from your software application, access <b>Printing Preferences</b>.</li><li><b>b</b> Click the <b>Advanced</b> tab, select <b>Edit</b> from the <b>Watermark</b> drop-down list. The <b>Edit Watermarks</b> window appears.</li><li><b>c</b> Select the watermark you want to delete from the <b>Current Watermarks</b> list and click <b>Delete</b>.</li><li><b>d</b> Click <b>OK</b> or <b>Print</b> until you exit the <b>Print</b> window.</li></ul>





# Printing features

Item	Description
<p><b>Overlay<sup>a</sup></b></p> 	<p>This option is available only when you use the PCL/SPL printer driver (see "Software" on page 7).</p> <p>An overlay is text and/or images stored in the computer hard disk drive (HDD) as a special file format that can be printed on any document. Overlays are often used to take the place of letterhead paper. Rather than using preprinted letterhead, you can create an overlay containing exactly the same information that is currently on your letterhead. To print a letter with your company's letterhead, you do not need to load preprinted letterhead paper in the machine: just print the letterhead overlay on your document.</p> <p>To use a page overlay, you must create a new page overlay containing your logo or image.</p> <div data-bbox="383 592 2197 751" style="background-color: #f0f0f0; padding: 10px;"><ul style="list-style-type: none"><li>• The overlay document size must be the same as the document you print with the overlay. Do not create an overlay with a watermark.</li><li>• The resolution of the overlay document must be the same as that of the document you will print with the overlay.</li></ul></div>
<p><b>Overlay<sup>a</sup></b> <b>(Creating a new page overlay)</b></p>	<ol style="list-style-type: none"><li><b>a</b> To save the document as an overlay, access <b>Printing Preferences</b>.</li><li><b>b</b> Click the <b>Advanced</b> tab, and select <b>Edit</b> from the <b>Text</b> drop-down list. <b>Edit Overlay</b> window appears.</li><li><b>c</b> In the <b>Edit Overlay</b> window, click <b>Create</b>.</li><li><b>d</b> In the <b>Save As</b> window, type a name up to eight characters in the <b>File name</b> box. Select the destination path, if necessary (The default is C:\Formover).</li><li><b>e</b> Click <b>Save</b>. The name appears on the <b>Overlay List</b>.</li><li><b>f</b> Click <b>OK</b> or <b>Print</b> until you exit the <b>Print</b> window.</li></ol> <p>The file is not printed. Instead, it is stored on your computer hard disk drive.</p>

# Printing features

Item	Description
<b>Overlay<sup>a</sup></b> <b>(Using a page overlay)</b>	<ul style="list-style-type: none"><li><b>a</b> Click the <b>Advanced</b> tab.</li><li><b>b</b> Select the desired overlay from the <b>Text</b> drop-down list.</li><li><b>c</b> If the overlay file you want does not appear in the <b>Text</b> drop-down list, select <b>Edit...</b> from the list and click <b>Load</b>. Select the overlay file you want to use. If you have stored the overlay file you want to use in an external source, you can also load the file when you access the <b>Open</b> window. After you select the file, click <b>Open</b>. The file appears in the <b>Overlay List</b> box and is available for printing. Select the overlay from the <b>Overlay List</b> box.</li><li><b>d</b> If necessary, check <b>Confirm Page Overlay When Printing</b> box. If this box is checked, a message window appears each time you submit a document for printing, asking you to confirm printing an overlay on your document. If this box is not checked and an overlay has been selected, the overlay automatically prints with your document.</li><li><b>e</b> Click <b>OK</b> or <b>Print</b> until you exit the <b>Print</b> window.</li></ul>
<b>Overlay<sup>a</sup></b> <b>(Deleting a page overlay)</b>	<ul style="list-style-type: none"><li><b>a</b> In the <b>Printing Preferences</b> window, click the <b>Advanced</b> tab.</li><li><b>b</b> Select <b>Edit</b> in the <b>Text</b> drop down list.</li><li><b>c</b> Select the overlay you want to delete from the <b>Overlay List</b> box.</li><li><b>d</b> Click <b>Delete</b>.</li><li><b>e</b> When a confirming message window appears, click <b>Yes</b>.</li><li><b>f</b> Click <b>OK</b> or <b>Print</b> until you exit the <b>Print</b> window. You can delete page overlays that you no longer use.</li></ul>

# Printing features

Item	Description
<b>Print Mode</b>	<div data-bbox="383 284 2197 443" style="background-color: #f0f0f0; padding: 5px;"> <ul style="list-style-type: none"><li>• This feature is available only if you have installed the optional memory or mass storage device (HDD) (see "Variety feature" on page 8).</li><li>• Some menus may not appear on the display depending on options or models. If so, it is not applicable to your machine.</li></ul></div> <ul style="list-style-type: none"><li>• <b>Print Mode:</b> The default <b>Print Mode</b> is <b>Normal</b>, which is for printing without saving the printing file in the memory.<ul style="list-style-type: none"><li>- <b>Normal:</b> This mode prints without storing your document in the optional memory.</li><li>- <b>Proof:</b> This mode is useful when you print more than one copy. You can print one copy first to check, then print the rest of the copies later.</li><li>- <b>Confidential:</b> This mode is used for printing confidential documents. You need to enter a password to print.</li><li>- <b>Store:</b> Select this setting to save a document in the mass storage device (HDD) without printing.</li><li>- <b>Store and Print:</b> This mode is used when printing and storing document at the same time.</li><li>- <b>Spool:</b> This option can be useful when handling large amounts of data. If you select this setting, the printer spools the document into the mass storage device (HDD) and then prints it from the mass storage device (HDD) queue, decreasing the computer's work load.</li><li>- <b>Print Schedule:</b> Select this setting to print the document at a specified time.</li></ul></li><li>• <b>User ID:</b> This option is used when you need to find a saved file using the control panel.</li><li>• <b>Job Name:</b> This option is used when you need to find a saved file using the control panel.</li></ul>
<b>Job Encryption</b>	<p data-bbox="383 1002 2197 1074">Encrypts printing data first, and transmits it to the machine. This feature protects the printing information even though the data is snatched on a network.</p> <div data-bbox="383 1129 2197 1289" style="background-color: #f0f0f0; padding: 5px;"> <b>Job Encryption</b> feature is enabled only when the mass storage device (HDD) is installed. The mass storage device (HDD) is used to decrypt the printing data (see "Variety feature" on page 8).</div>

a. This option is not available when you use XPS driver.

# Printing features

## Mac printing



Some features may not be available depending on models or options. It means that the features are not supported.

## Printing a document

When you print with a Mac, you need to check the printer driver settings in each application you use. Follow the steps below to print from a Mac:

- 1 Open the document to print.
- 2 Open the **File** menu and click **Page Setup** (**Document Setup** in some applications).
- 3 Choose your paper size, orientation, scaling, other options, and make sure that your machine is selected. Click **OK**.
- 4 Open the **File** menu and click **Print**.
- 5 Choose the number of copies and indicate which pages to print.
- 6 Click **Print**.

## Changing printer settings

You can use advanced printing features when using your machine.

Open an application and select **Print** from the **File** menu. The machine name, which appears in the printer properties window, may differ depending on the machine in use. Except for the name, the composition of the printer properties window is similar to the following.

## Printing multiple pages on one sheet

You can print more than one page on a single sheet of paper. This feature provides a cost-effective way to print draft copies.

- 1 Open an application, and select **Print** from the **File** menu.
- 2 Select **Layout** from the drop-down list under **Orientation**. In the **Pages per Sheet** drop-down list, select the number of pages you want to print on one sheet of paper.
- 3 Select the other options to use.
- 4 Click **Print**.  
The machine prints the selected number of pages to print on one sheet of paper.

# Printing features

## Printing on both sides of the paper



Some features may not be available depending on models or options. It means that the features are not supported (see "Variety feature" on page 8).

Before printing in the duplex mode, decide on which edge you will be binding your finished document. The binding options are, as follows:

- **Long-Edge Binding:** This option is the conventional layout used in book binding.
- **Short-Edge Binding:** This option is the type often used with calendars.

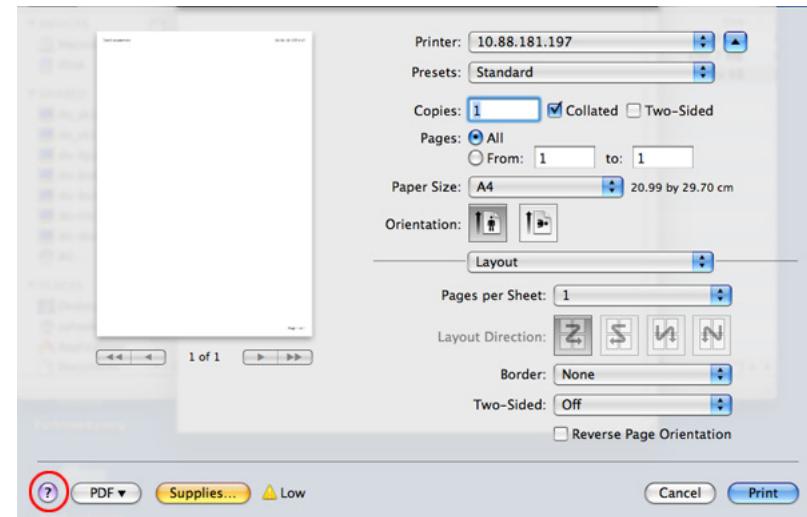
- 1 From your Mac application, select **Print** from the **File** menu.
- 2 Select **Layout** from the drop-down list under **Orientation**.
- 3 Select a binding orientation from the **Two-Sided** option.
- 4 Select the other options to use.
- 5 Click **Print** and the machine prints on both sides of the paper.



If you print more than 2 copies, the first copy and the second copy might print on the same sheet of paper. Avoid printing on both sides of paper when you are printing more than 1 copy.

## Using help

Click the question mark on the bottom-left corner of the window and click on the topic you want to know about. A pop-up window appears with information about that option's feature, which is provided from the driver.



# Printing features

## Linux printing



Some features may not be available depending on models or options. It means that the features are not supported.

## Printing from applications

There are a lot of Linux applications that allow you to print using Common UNIX Printing System (CUPS). You can print on your machine from any such application.

- 1 Open the document to print
- 2 Open the **File** menu and click **Page Setup** (**Print Setup** in some applications).
- 3 Choose your paper size, orientation, and make sure that your machine is selected. Click **Apply**.
- 4 Open the **File** menu and click **Print**.
- 5 Select your machine to print.
- 6 Choose the number of copies and indicate which page to print.

- 7 Change other printing options in each tab, if necessary.
- 8 Click **Print**.



Automatic/manual duplex printing may not be available depending on models. You can alternatively use the lpr printing system or other applications for odd-even printing.

## Printing files

You can print many different types of files on your machine using the standard CUPS, directly from the command line interface. The CUPS lpr utility allows you to do that. You can print these files by using the command format below.

```
lp -d <printer name> -o <option> <file name>
```

Please refer to lp or man page on your system for more details.

## Configuring Printer Properties

Using the **Printer Properties** window provided by the **Printers configuration**, you can change the various properties for your machine as a printer.

# Printing features

- 1 Open the **Unified Driver Configurator**.  
If necessary, switch to **Printers configuration**.
- 2 Select your machine on the available printers list and click **Properties**.
- 3 The **Printer Properties** window appears.  
The following five tabs display at the top of the window:
  - **General:** Allows you to change the printer location and name. The name entered in this tab displays on the printer list in **Printers configuration**.
  - **Connection:** Allows you to view or select another port. If you change the machine port from USB to parallel or vice versa while in use, you must re-configure the machine port in this tab.
  - **Driver:** Allows you to view or select another machine driver. By clicking **Options**, you can set the default device options.
  - **Jobs:** Shows the list of print jobs. Click **Cancel job** to cancel the selected job and select the **Show completed jobs** check box to see previous jobs on the job list.
  - **Classes:** Shows the class that your machine is in. Click **Add to Class** to add your machine to a specific class or click **Remove from Class** to remove the machine from the selected class.
- 4 Click **OK** to apply the changes and close the **Printer Properties** window.

# Scan features



- For basic scanning features, refer to the Basic Guide (see "Basic scanning" on page 43).
- This feature may not be available depending on model or optional goods (see "Features by models" on page 7).
- The maximum resolution that can be achieved depends upon various factors, including computer speed, available disk space, memory, the size of the image being scanned, and bit depth settings. Thus, depending on your system and what you are scanning, you may not be able to scan at certain resolutions, especially using enhanced dpi.

## Basic scanning method



- This feature may not be available depending on model or optional goods (see "Variety feature" on page 8).

You can scan the originals with your machine via an USB cable or the network. The following methodologies can be used for scanning your documents:

- **Scan to PC:** Scan the originals from the control panel. Then, the scanned data will be stored in the connected computers **My Documents** folder (see "Basic Scanning" on page 43).

- **TWAIN:** TWAIN is the one of a preset imaging applications. Scanning an image launches the selected application, enabling you to control the scanning process. This feature can be used via the local connection or the network connection (see "Scanning from image editing program" on page 149).
- **Dell Scan Assistant:** You can use this program to scan images or documents.
  - See "Scanning with Dell Scan Assistant" on page 150.
- **WIA:** WIA stands for Windows Images Acquisition. To use this feature, your computer must be connected directly with the machine via an USB cable (see "Scanning using the WIA driver" on page 150).
- **USB Memory:** You can scan a document and save the scanned image onto an USB memory device.
- **Email:** You can send the scanned image as an email attachment.
- **FTP/SMB:** You can scan an image and upload it to an FTP/SMB server.



# Scan features

## Setting the scan settings in the computer



This feature may not be available depending on model or optional goods (see "Features by models" on page 7).

- 1 Open **Dell Printer Manager** (see "Using Dell Printer Manager" on page 160).
- 2 Select the appropriate machine from the **Printer List**.
- 3 Select **Scan to PC Settings** menu.
- 4 Select the option you want.
  - **Scan Activation:** Determines whether or not scanning is enabled on the device.
  - **Basic** tab: Contains settings related to general scan and device settings.
  - **Image** tab: Contains settings related to image altering.
- 5 Press **Save > OK**.

## Scanning from image editing program

You can scan and import documents at the image editing software such as Adobe Photoshop, if the software is TWAIN-compliant. Follow the steps below to scan with TWAIN-compliant software:

- 1 Make sure that the machine is connected to your computer and powered on.
- 2 Place a single document face down on the document glass, or load the documents face up into the document feeder (see "Loading originals" on page 34).
- 3 Open an application, such as Adobe Photoshop.
- 4 Click **File > Import**, and select the scanner device.
- 5 Set the scan options.
- 6 Scan and save your scanned image.

# Scan features

## Scanning using the WIA driver

Your machine supports the Windows Image Acquisition (WIA) driver for scanning images. WIA is one of the standard components provided by Microsoft Windows 7 and works with digital cameras and scanners. Unlike the TWAIN driver, the WIA driver allows you to scan and easily adjust images without using additional software:



The WIA driver works only on Windows OS (not supported Windows 2000) with a USB port.

- 1 Make sure that the machine is connected to your computer and powered on.
- 2 Place a single document face down on the document glass, or load the documents face up into the document feeder (see "Loading originals" on page 34).
- 3 Click **Start > Control Panel > Hardware and Sound > Devices and Printers**.
- 4 Right-click on device driver icon in **Printers and Faxes > Start Scan**.
- 5 **New Scan** application appears.

- 6 Choose your scanning preferences and click **Preview** to see your preferences affect the picture.
- 7 Scan and save your scanned image.

## Scanning with Dell Scan Assistant



- This feature may not be available depending on model or optional goods (see "Features by models" on page 7).
- For Windows, you need to install the printer software from the supplied CD/DVD. For Mac, open the **Applications** folder > **Dell** folder > **DellScan Assistant**.

- 1 Download the software from the Dell website then unpack and install it.
- 2 Make sure that the machine is connected to your computer and powered on.
- 3 Place a single document face down on the document glass, or load the documents face up into the document feeder (see "Loading originals" on page 34).
- 4 Click **Start > All programs > Dell Printers**, and start **Dell Scan Assistant**.

# Scan features



Select the **Help** menu from the window and click on any option you want to know about.

5 Set the scan options.

6 Click **Scan**.

## Mac scanning

### Scanning from USB connected machine

- 1 Make sure that the machine is connected to your computer and powered on.
- 2 Place a single document face down on the document glass, or load the documents face up into the document feeder (see "Loading originals" on page 34).
- 3 Start **Applications** and click **Image Capture**.



If **No Image Capture device connected** message appears, disconnect the USB cable and reconnect it. If the problem continues, refer to the **Image Capture**'s help.

4 Select the option you want.

5 Scan and save your scanned image.



If scanning does not operate in **Image Capture**, update Mac OS to the latest version.

### Scanning from network connected machine



Network or wireless model only (see "Features by models" on page 7).

- 1 Make sure that your machine is connected to a network.
- 2 Place a single document face down on the document glass, or load the documents face up into the document feeder (see "Loading originals" on page 34).
- 3 Start **Applications** and click **Image Capture**.
- 4 According to OS, follow steps below.
  - For 10.5
    - Click **Devices** > **Browse Devices** on Menu bar.
    - Make sure that **Connected** checkbox is checked beside your machine in **Bonjour Devices**.

# Scan features

- For 10.6 -10.9, select your device below **SHARED**.

**5** Set the scan options on this program.


**6** Scan and save your scanned image.



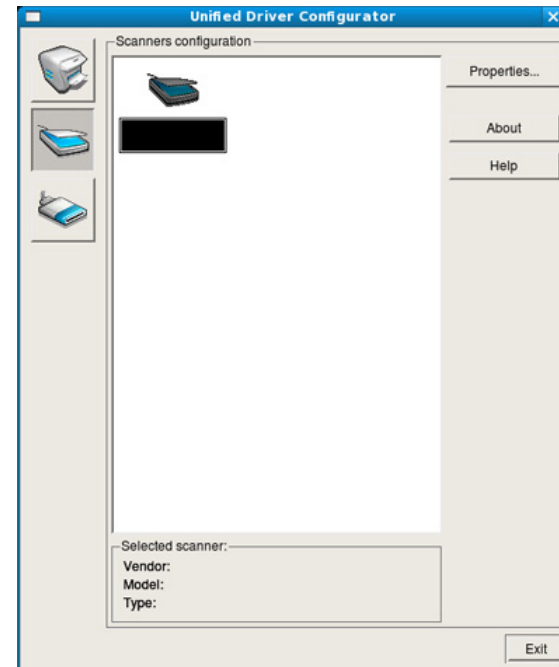
- If scanning does not operate in Image Capture, update Mac OS to the latest version.
- For more information, refer to the **Image Capture**'s help.
- You can also scan using TWAIN-compliant software, such as Adobe Photoshop.

## Linux scanning

### Scanning

- 1** Make sure that the machine is connected to your computer and powered on.
- 2** Double-click the **Unified Driver Configurator** on your desktop.
- 3** Click the  button to switch to Scanners Configuration.

**4** Select the scanner on the list.



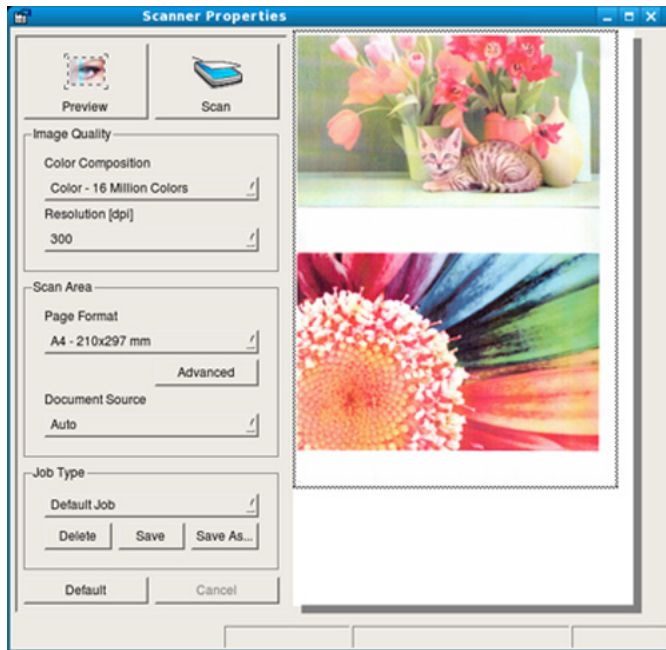
**5** Click **Properties**.

**6** Place a single document face down on the document glass, or load the documents face up into the document feeder (see "Loading originals" on page 34).

**7** From the **Scanner Properties** window, click **Preview**.

# Scan features

- 8 The document is scanned and the image preview appears in the **Preview Pane**.



- 9 Drag the pointer to set the image area to be scanned in the **Preview Pane**.

- 10 Select the option you want.

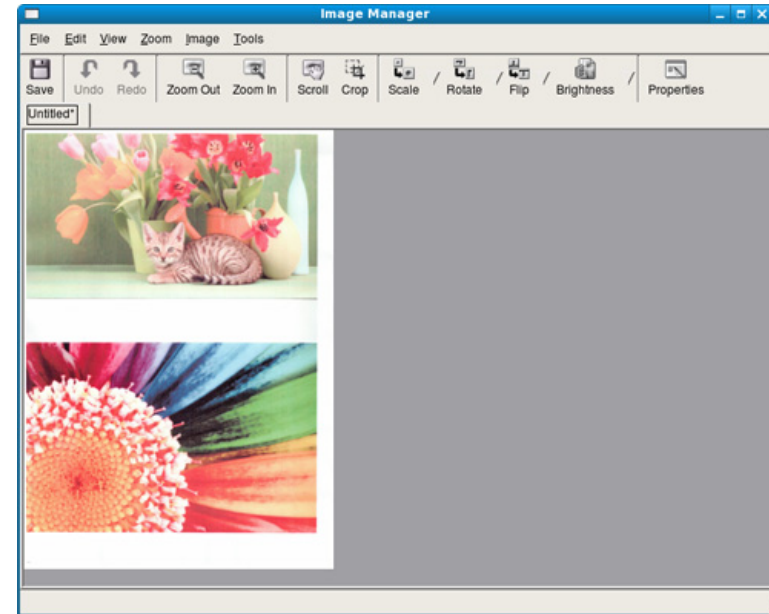
- 11 Scan and save your scanned image.



For later use, you can save as your scan settings and add it to the **Job Type** drop-down list.

## Editing an image with Image Manager

The Image Manager application provides you with menu commands and tools to edit your scanned image.

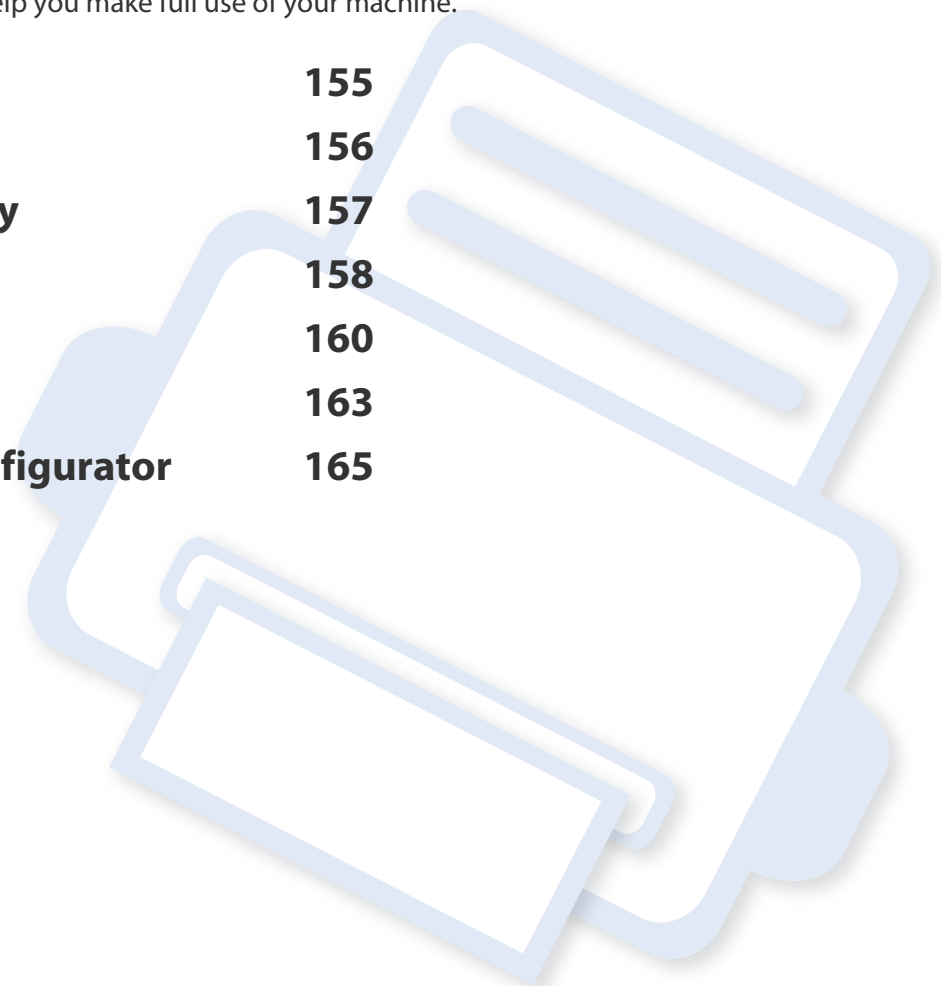




## 4. Useful Management Tools

This chapter introduces management tools provided to help you make full use of your machine.

- **Accessing management tools** 155
- **Using Firmware update utility** 156
- **Using Dell Supplies Ordering Utility** 157
- **Using Embedded Web Service** 158
- **Using Dell Printer Manager** 160
- **Using Dell Printer Status** 163
- **Using the Linux Unified Driver Configurator** 165



# Accessing management tools

Dell provides a variety of management tools for Dell printers.

- 1 Make sure that the machine is connected to your computer and powered on.
- 2 From the **Start** menu, select **Programs** or **All Programs**.
  - For Windows 8, from the **Charms**, select **Search > Apps**.
- 3 Find **Dell Printers**.
- 4 Under **Dell Printers**, you can see installed management tools.
- 5 Click the management tool you want to use.

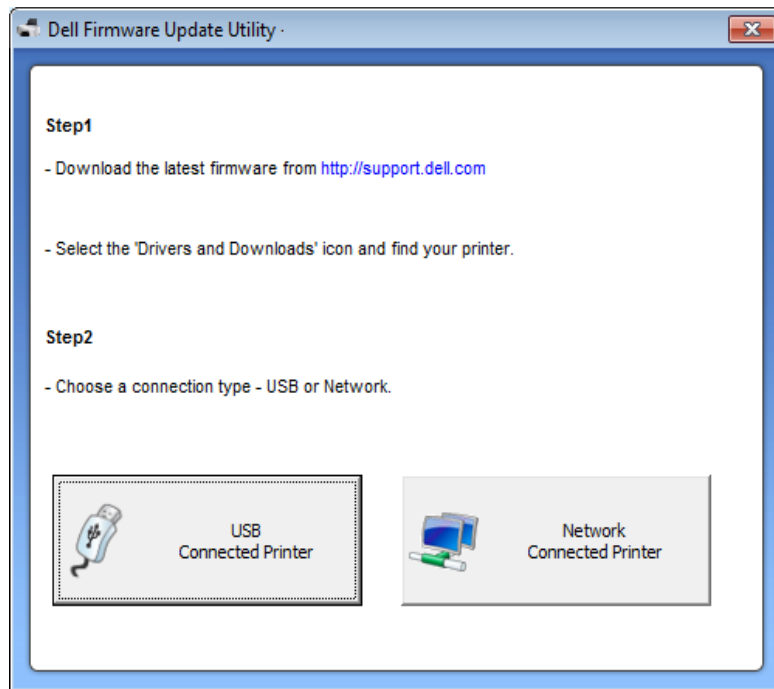


- After installing the driver, for some management tools, you can access them directly from the **Start** screen by clicking on the corresponding tile.
- For Windows 8, after installing the driver, for some management tools, you can access them directly from the **Start** screen by clicking on the corresponding tile.

# Using Firmware update utility

Firmware Update Utility allows you to maintain your machine by upgrading firmware.

- 1 From the **Start** menu, select **Programs** or **All Programs** > **Dell Printers** > **your printer driver name** > **Firmware Update Utility**.
- 2 Download the latest firmware. Click <http://www.dell.com/support>.
- 3 If your printer is connected with an USB cable, click **USB Connected Printer** or **Network Connected Printer**.



- 4 Click **Browse** and select the downloaded firmware file.
- 5 Click **Update Firmware**.



# Using Dell Supplies Ordering Utility

To order replacement toner cartridges or supplies from Dell:



Available for Windows or Mac OS users only.

1 Double-click the **Dell Supplies Ordering Utility** icon on your desktop.



OR

From the **Start** menu, select **Programs** or **All Programs** > **Dell Printers** > **your printer driver name** > **Dell Supplies Ordering Utility**.



For Mac,

Open the **Applications** folder > **Dell** folder > **Dell Supplies Ordering Utility**.

2 The **Dell Supplies Ordering Utility** window opens.



# Using Embedded Web Service



- Internet Explorer 6.0 or higher is the minimum requirement for Embedded Web Service.
- Embedded Web Service explanation in this user's guide may differ from your machine depending on its options or models.
- Network model only (see "Software" on page 7).

## Accessing Embedded Web Service

- 1 Access a web browser, such as Internet Explorer, from Windows.  
Enter the machine IP address of your printer (<http://xxx.xxx.xxx.xxx>) in the address field and press the Enter key or click **Go**.
- 2 Your machine's embedded website opens.

## Logging into Embedded Web Service

Before configuring options in Embedded Web Service, you need to log-in as an administrator. You can still use Embedded Web Service without logging in but you won't have access to **Settings** tab and **Security** tab.

- 1 Click **Login** on the upper right of the Embedded Web Service website.
- 2 Type in the **ID** and **Password** then click **Login**.
  - **ID: admin**
  - **Password: dell00000**

## Embedded Web Service overview



Some tabs may not appear depending on your model.



Information

Settings

Security

Maintenance

## Information tab

This tab gives you general information about your machine. You can check things, such as remaining amount of toner. You can also print reports, such as an error report.

- **Active Alerts:** Shows the alerts that have occurred in the machine and their severity.
- **Supplies:** Shows how many pages are printed and amount of toner left in the cartridge.

# Using Embedded Web Service

- **Usage Counters:** Shows the usage count by print types: simplex and duplex.
- **Current Settings:** Shows the machine's and network's information.
- **Print information:** Prints reports such as system related reports, e-mail address, and font reports.

## Settings tab

---

This tab allows you to set configurations provided by your machine and network. You need to log-in as an administrator to view this tab.

- **Machine Settings** tab: Sets options provided by your machine.
- **Network Settings** tab: Shows options for the network environment. Sets options such as TCP/IP and network protocols.

## Security tab

---

This tab allows you to set system and network security information. You need to log-in as an administrator to view this tab.

- **System Security:** Sets the system administrator's information and also enables or disables machine features.
- **Network Security:** IPv4/IPv6 filtering.
- **User Access Control:** Classifies users into several groups according to each user's role. Each user's authorization, authentication and accounting will be controlled by the group's role definition.

## Maintenance tab

---

This tab allows you to maintain your machine by upgrading firmware and setting contact information for sending emails. You can also connect to Dell website or download drivers by selecting the **Link** menu.

- **Firmware Upgrade:** Upgrade your machine's firmware.
- **Contact Information:** Shows the contact information.
- **Link:** Shows links to useful sites where you can download or check information.

# Using Dell Printer Manager



- Available for Windows and Mac OS users only (see "Software" on page 7).
- For Windows, Internet Explorer 6.0 or higher is the minimum requirement for Dell Printer Manager.

Dell Printer Manager is an application that combines Dell machine settings into one location. Dell Printer Manager combines device settings as well as printing environments, settings/actions and launching. All of these features provide a gateway to conveniently use your Dell machine. Dell Printer Manager provides two different user interfaces for the user to choose from: the basic user interface and the advanced user interface. Switching between the two interfaces is easy: just click a button.

## Understanding Dell Printer Manager

To open the program:

### For Windows,

Select **Start > Programs** or **All Programs > Dell > Dell Printers > Dell Printer Manager > Dell Printer Manager**.

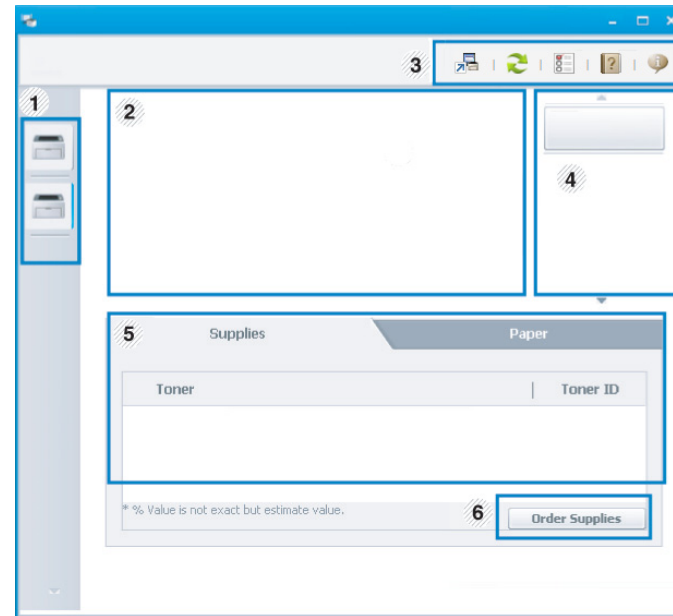
### For Mac,

Open the **Applications** folder > **Dell** folder > **Dell Printer Manager**.

The Dell Printer Manager interface is comprised of various basic sections as described in the table that follows:







The screenshot may differ depending on operating system you are using.




1	Printer list	The Printer List displays printers installed on your computer and network printers added by network discovery (Windows only).
---	--------------	---

# Using Dell Printer Manager

2	Printer information	<p>This area gives you general information about your machine. You can check information, such as the machine's model name, IP address (or Port name), and machine status.</p> <p> You can view the online <b>User's Guide</b>.</p>
3	<b>Application information</b>	<p>Includes links for changing to the advanced settings, preference, help, and about.</p> <p> The  button is used to change the user interface to the <b>advanced settings user interface</b> (see "Advanced settings user interface overview" on page 162).</p>
4	Quick links	<p>Displays <b>Quick links</b> to machine specific functions. This section also includes links to applications in the advanced settings.</p> <p> If you connect your machine to a network, the Embedded Web Service icon is enabled.</p>

5	Contents area	<p>Displays information about the selected machine, remaining toner level, and paper. The information will vary based on the machine selected. Some machines do not have this feature.</p>
6	Order supplies	<p>Click on the <b>Order</b> button from the supply ordering window. You can order replacement toner cartridge(s) from online.</p>



Select the **Help** menu or click the  button from the window and click on any option you want to know about.

# Using Dell Printer Manager

## Advanced settings user interface overview

The advanced user interface is intended to be used by the person responsible for managing the network and machines.



Some menus may not appear in the display depending on options or models. If so, it is not applicable to your machine.

## Device Settings

You can configure various machine settings such as machine setup, paper, layout, emulation, network, and print information.

## Scan to PC Settings

This menu includes settings to create or delete scan to PC profiles.

- **Scan Activation:** Determines whether or not scanning is enabled on the device.
- **Profile:** Displays the scanning profiles saved on the selected device.
- **Basic tab:** Contains settings related to general scan and device settings.
- **Image tab:** Contains settings related to image altering.

## Alert Settings (Windows only)

This menu includes settings related to error alerting.

- **Printer Alert:** Provides settings related to when alerts will be received.
- **Email Alert:** Provides options relating to receiving alerts via email.
- **Alert History:** Provides a history of device and toner related alerts.

# Using Dell Printer Status

The Dell Printer Status is a program that monitors and informs you of the machine status.



- The Dell Printer Status window and its contents shown in this user's guide may differ depending on the machine or operating system in use.
- Check the operating system(s) that are compatible with your machine (see "Specifications" on page 71).
- Available for Windows OS users only (see "Software" on page 7).

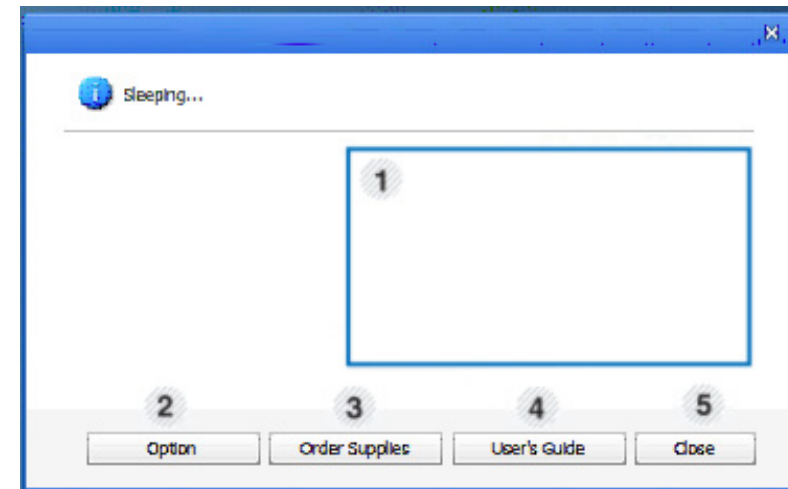
## Dell Printer Status overview

If an error occurs while operating, you can check the error from the Dell Printer Status. Dell Printer Status is installed automatically when you install the machine software.

You can also launch Dell Printer Status manually. Go to the **Printing Preferences**, click the **Basic** tab > **Printer Status** button.

These icons appear on the Windows task bar:

Icon	Mean	Description
	Normal	The machine is in ready mode and experiencing no errors or warnings.
	Warning	The machine is in a state where an error might occur in the future. For example, it might be in toner low status, which may lead to toner empty status.
	Error	The machine has at least one error.



1	<b>Toner Level</b>	You can view the level of toner remaining in each toner cartridge. The machine and the number of toner cartridge(s) shown in the above window may differ depending on the machine in use. Some machines do not have this feature.
---	--------------------	---

# Using Dell Printer Status

2	<b>Option</b>	You can set printing job alert related settings.
3	<b>Order Supplies</b>	You can order replacement toner cartridge(s) from online.
4	<b>User's Guide</b>	You can view the online User's Guide.
5	<b>Close</b>	Close the window.



# Using the Linux Unified Driver Configurator

The Unified Driver Configurator is a tool primarily intended for configuring machine devices. You need to install Unified Linux Driver to use Unified Driver Configurator (see "Installation for Linux" on page 99).

After the driver is installed on your Linux system, the Unified Driver Configurator icon will automatically be created on your desktop.

## Opening Unified Driver Configurator

- 1 Double-click the **Unified Driver Configurator** on the desktop.  
You can also click the **Startup** Menu icon and select **DELL Unified Driver > Unified Driver Configurator**.
- 2 Click each button on the left to switch to the corresponding configuration window.



- 1 **Printer Configuration**
- 2 **Port Configuration**



To use the on screen help, the **Help** or  button from the window.

- 3 After changing the configurations, click **Exit** to close the **Unified Driver Configurator**.

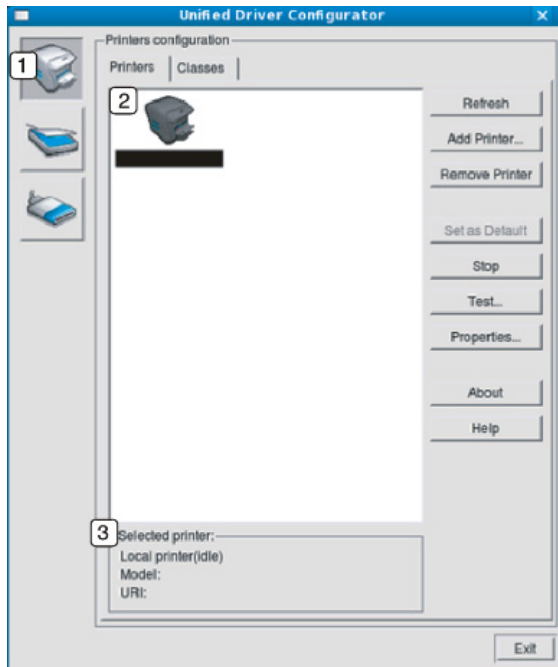
# Using the Linux Unified Driver Configurator

## Printers configuration

**Printers configuration** has the two tabs: **Printers** and **Classes**.

## Printers tab

View the current system's printer configuration by clicking on the machine icon button on the left side of the **Unified Driver Configurator** window.



1	Switches to <b>Printers configuration</b> .
2	Shows all of the installed machines.
3	Shows the status, model name, and URI of your machine.

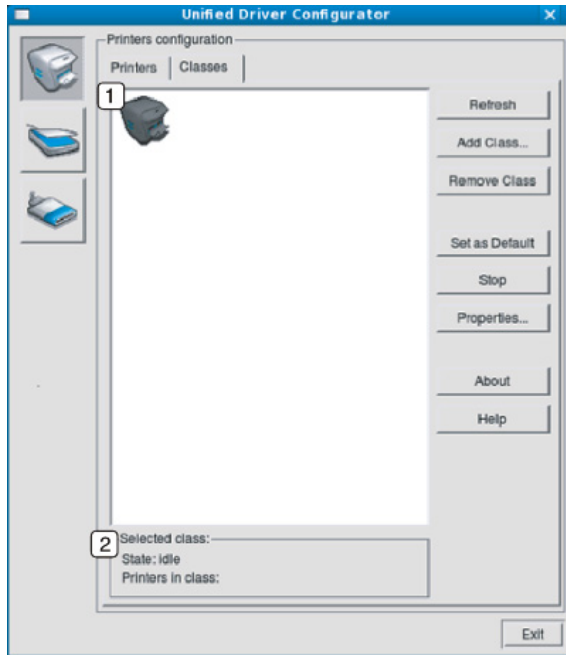
The printer control buttons are, as follows:

- **Refresh:** Renews the available machines list.
- **Add Printer:** Allows you to add a new machines.
- **Remove Printer:** Removes the selected machine.
- **Set as Default:** Sets the current selected machine as a default machine.
- **Stop/Start:** Stops/starts the machine.
- **Test:** Allows you to print a test page to ensure the machine is working properly.
- **Properties:** Allows you to view and change the printer's properties.

# Using the Linux Unified Driver Configurator

## Classes tab

The Classes tab shows a list of available machine classes.

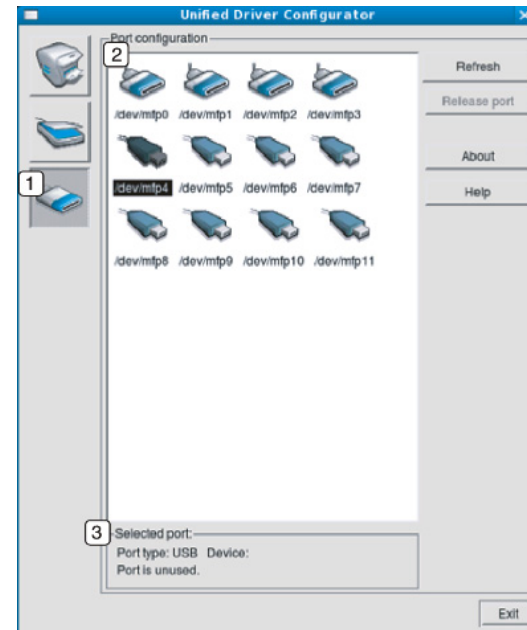


- 1 Shows all of the machine classes.
- 2 Shows the status of the class and the number of machines in the class.

- **Refresh:** Renews the classes list.
- **Add Class:** Allows you to add a new machine class.
- **Remove Class:** Removes the selected machine class.

## Ports configuration

In this window, you can view the list of available ports, check the status of each port and release a port that is stalled in a busy state when its owner has terminated the job for any reason.



- 1 Switches to **Ports configuration**.
- 2 Shows all of the available ports.
- 3 Shows the port type, device connected to the port, and status.

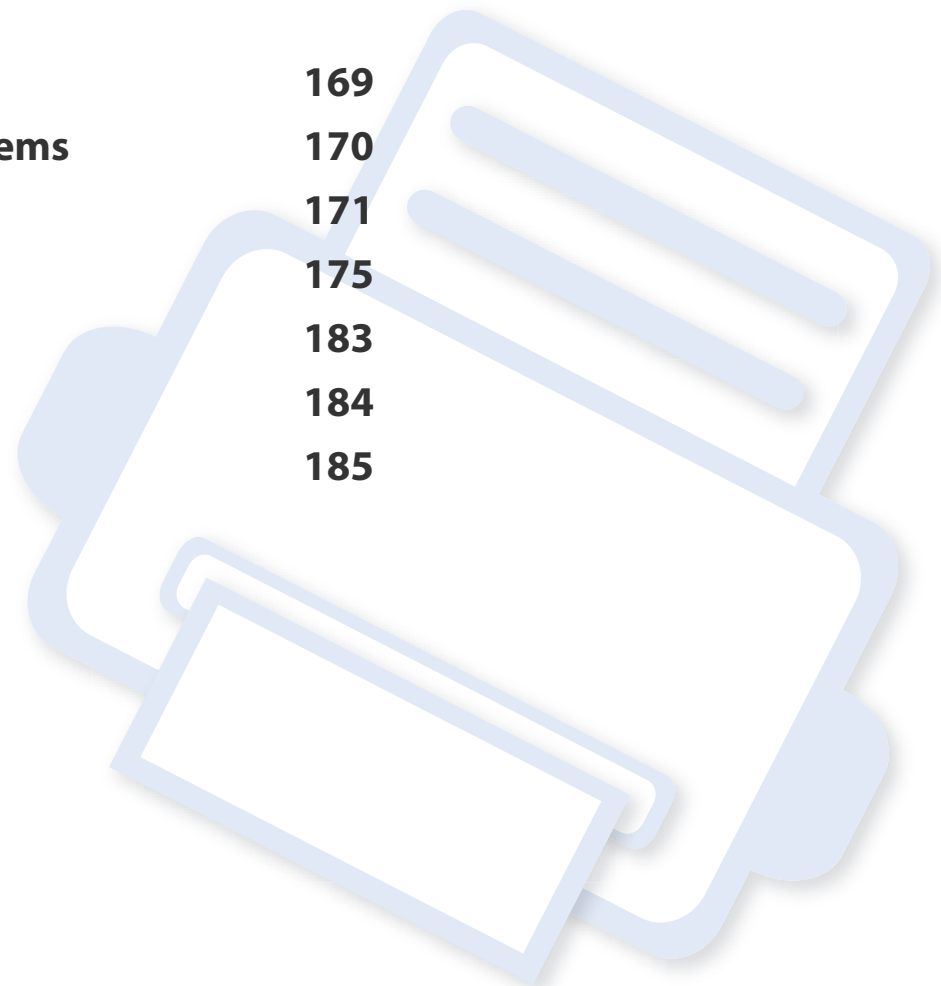
- **Refresh:** Renews the available ports list.
- **Release port:** Releases the selected port.



# 5. Troubleshooting

This chapter gives helpful information for what to do if you encounter an error.


- **Paper feeding problems** 169
- **Power and cable connecting problems** 170
- **Printing problems** 171
- **Printing quality problems** 175
- **Copying problems** 183
- **Scanning problems** 184
- **Operating system problems** 185




# Paper feeding problems

Condition	Suggested solutions
<b>Paper jams during printing.</b>	Clear the paper jam.
<b>Paper sticks together.</b>	<ul style="list-style-type: none"><li>• Check the maximum paper capacity of the tray.</li><li>• Make sure that you are using the correct type of paper.</li><li>• Remove paper from the tray and flex or fan the paper.</li><li>• Humid conditions may cause some paper to stick together.</li></ul>
<b>Multiple sheets of paper do not feed.</b>	Different types of paper may be stacked in the tray. Load paper of only one type, size, and weight.
<b>Paper does not feed into the machine.</b>	<ul style="list-style-type: none"><li>• Remove any obstructions from inside the machine.</li><li>• Paper has not been loaded correctly. Remove paper from the tray and reload it correctly.</li><li>• There is too much paper in the tray. Remove excess paper from the tray.</li><li>• The paper is too thick. Use only paper that meets the specifications required by the machine.</li></ul>
<b>The paper keeps jamming.</b>	<ul style="list-style-type: none"><li>• There is too much paper in the tray. Remove excess paper from the tray. If you are printing on special materials, use the manual feeding in tray.</li><li>• An incorrect type of paper is being used. Use only paper that meets the specifications required by the machine.</li><li>• There may be debris inside the machine. Open the front cover and remove any debris.</li></ul>
<b>Envelopes skew or fail to feed correctly.</b>	Ensure that the paper guides are against both sides of the envelopes.

# Power and cable connecting problems

Condition	Suggested solutions
<b>The machine is not receiving power, or the connection cable between the computer and the machine is not connected properly.</b>	<ul style="list-style-type: none"><li data-bbox="658 300 2186 384">• Connect the machine to the electricity supply first. If the machine has a  (<b>Power/Wakeup</b>) button on the control, press it.</li><li data-bbox="658 405 1323 437">• Disconnect the machine's cable and reconnect it.</li></ul>

# Printing problems


Condition	Possible cause	Suggested solutions
<b>The machine does not print.</b>	The machine is not receiving power.	Connect the machine to the electricity supply first. If the machine has a  ( <b>Power/Wakeup</b> ) button on the control, press it.
	The machine is not selected as the default machine.	Select your machine as your default machine in Windows.
	Check the machine for the following: <ul style="list-style-type: none"><li>• The cover is not closed. Close the cover.</li><li>• Paper is jammed. Clear the paper jam (see "Clearing paper jams" on page 64).</li><li>• No paper is loaded. Load paper (see "Loading paper in the tray" on page 27).</li><li>• The toner cartridge is not installed. Install the toner cartridge (see "Replacing the toner cartridge" on page 53).</li><li>• Make sure the protect cover and sheets are removed from the toner cartridge (see "Replacing the toner cartridge" on page 53).</li></ul> If a system error occurs, contact your service representative.	
	The connection cable between the computer and the machine is not connected properly.	Disconnect the machine cable and reconnect it (see "Rear view" on page 18).
	The connection cable between the computer and the machine is defective.	If possible, attach the cable to another computer that is working properly and print a job. You can also try using a different machine cable.
	The port setting is incorrect.	Check the Windows printer settings to make sure that the print job is sent to the correct port. If the computer has more than one port, make sure that the machine is attached to the correct one.

# Printing problems

Condition	Possible cause	Suggested solutions
<b>The machine does not print.</b>	The machine may be configured incorrectly.	Check the <b>Printing Preferences</b> to ensure that all of the print settings are correct.
	The printer driver may be incorrectly installed.	Uninstall and reinstall the machine's driver.
	The machine is malfunctioning.	Check the display message on the control panel to see if the machine is indicating a system error. Contact a service representative.
	The document size is so big that the hard disk space of the computer is insufficient to access the print job.	Get more hard disk space and print the document again.
	The output tray is full.	Once the paper is removed from the output tray, the machine resumes printing.
<b>The machine selects print materials from the wrong paper source.</b>	The paper option that was selected in the <b>Printing Preferences</b> may be incorrect.	For many software applications, the paper source selection is found under the <b>Paper</b> tab within the <b>Printing Preferences</b> (see "Opening printing preferences" on page 37). Select the correct paper source. See the printer driver help screen (see "Using help" on page 39).
<b>A print job is extremely slow.</b>	The job may be very complex.	Reduce the complexity of the page or try adjusting the print quality settings.
<b>Half the page is blank.</b>	The page orientation setting may be incorrect.	Change the page orientation in your application (see "Opening printing preferences" on page 37). See the printer driver help screen (see "Using help" on page 39).
	The paper size and the paper size settings do not match.	Ensure that the paper size in the printer driver settings matches the paper in the tray. Or, ensure that the paper size in the printer driver settings matches the paper selection in the software application settings you use (see "Opening printing preferences" on page 37).
<b>The machine prints, but the text is wrong, garbled, or incomplete.</b>	The machine cable is loose or defective.	Disconnect the machine cable and reconnect. Try a print job that you have already printed successfully. If possible, attach the cable and the machine to another computer that you know works and try a print job. Finally, try a new machine cable.



# Printing problems

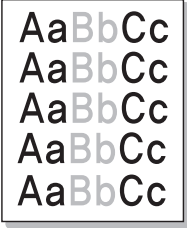
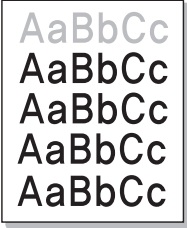
Condition	Possible cause	Suggested solutions
	The wrong printer driver was selected.	Check the application's printer selection menu to ensure that your machine is selected.
	The software application is malfunctioning.	Try printing a job from another application.
	The operating system is malfunctioning.	Exit Windows and reboot the computer. Turn the machine off and back on again.
<b>Pages print, but they are blank.</b>	The toner cartridge is defective or out of toner.	Redistribute the toner, if necessary. If necessary, replace the toner cartridge. <ul style="list-style-type: none"> <li>• See "Redistributing toner" on page 51.</li> <li>• See "Replacing the toner cartridge" on page 53.</li> </ul>
	The file may have blank pages.	Check the file to ensure that it does not contain blank pages.
	Some parts, such as the controller or the board, may be defective.	Contact a service representative.
<b>The machine does not print PDF files correctly. Some parts of graphics, text, or illustrations are missing.</b>	Incompatibility between the PDF file and the Acrobat products.	Printing the PDF file as an image may enable the file to print. Turn on <b>Print As Image</b> from the Acrobat printing options. <div data-bbox="1081 938 2190 1054" style="border: 1px solid #ccc; padding: 5px; margin-top: 10px;">  It will take longer to print when you print a PDF file as an image. </div>
<b>The print quality of photos is not good. Images are not clear.</b>	The resolution of the photo is very low.	Reduce the photo size. If you increase the photo size in the software application, the resolution will be reduced.
<b>Before printing, the machine emits vapor near the output tray.</b>	Using damp paper can cause vapor during printing.	This is not a problem. Just keep printing.

# Printing problems

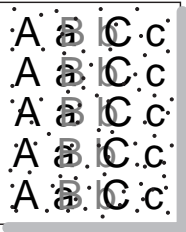
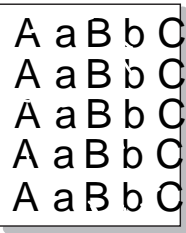

Condition	Possible cause	Suggested solutions
<b>The machine does not print special-sized paper, such as billing paper.</b>	Paper size and paper size setting do not match.	Set the correct paper size in the <b>Custom</b> in <b>Paper</b> tab in <b>Printing Preferences</b> (see "Opening printing preferences" on page 37).
<b>The printed billing paper is curled.</b>	The paper type setting does not match.	Change the printer option and try again. Go to <b>Printing Preferences</b> , click <b>Paper</b> tab, and set type to <b>Thick</b> (see "Opening printing preferences" on page 37).
Machine information is not displayed when you click the device in the <b>Devices and Printers</b> .	Check the <b>Printer properties</b> . Click the <b>Ports</b> tab. ( <b>Control Panel</b> > <b>Devices and Printers</b> > Right-click on your printer icon and select <b>Printer properties</b> )	Machine information is not displayed when you click the device in the <b>Devices and Printers</b> .
The error related toast message pops up.	If the port is set to File or LPT, uncheck them and select TCP/IP, USB, or WSD.	The error related toast message pops up.

# Printing quality problems

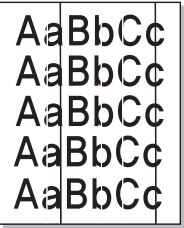
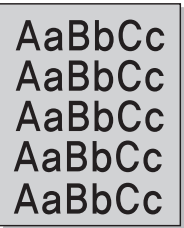
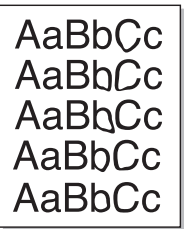
If the inside of the machine is dirty or paper has been loaded improperly, there might be a reduction in print quality. See the table below to clear the problem.

Condition	Suggested solutions
<p data-bbox="49 357 322 389"><b>Light or faded print</b></p> 	<ul data-bbox="506 357 2186 751" style="list-style-type: none"><li>• If a vertical white streak or faded area appears on the page, the toner supply is low. Install a new toner cartridge (see "Replacing the toner cartridge" on page 53).</li><li>• The paper may not meet paper specifications; for example, the paper may be too moist or rough.</li><li>• If the entire page is light, the print resolution setting is too low or the toner save mode is on. Adjust the print resolution and turn the toner save mode off. See the help screen of the printer driver.</li><li>• A combination of faded or smeared defects may indicate that the toner cartridge needs cleaning. Clean the inside of your machine (see "Cleaning the machine" on page 55).</li><li>• The surface of the LSU part inside the machine may be dirty. Clean the inside of your machine (see "Cleaning the machine" on page 55). If these steps do not correct the problem, contact a service representative.</li></ul>
<p data-bbox="49 786 472 903"><b>The top half of the paper is printed lighter than the rest of the paper</b></p> 	<p data-bbox="506 786 1301 818"><b>The toner might not adhere properly to this type of paper.</b></p> <ul data-bbox="506 842 2186 911" style="list-style-type: none"><li>• Change the printer option and try again. Go to <b>Printing Preferences</b>, click the <b>Paper</b> tab, and set the paper type to <b>Recycled</b> (see "Opening printing preferences" on page 37).</li></ul>

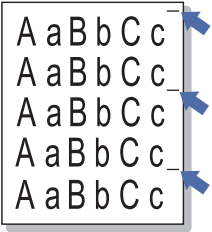
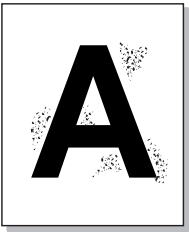
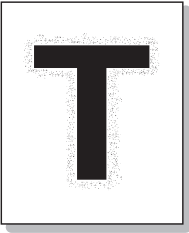
# Printing quality problems

Condition	Suggested solutions
<p><b>Toner specks</b></p> 	<ul style="list-style-type: none"><li>• The paper may not meet specifications; for example, the paper may be too moist or rough.</li><li>• The transfer roller may be dirty. Clean the inside of your machine (see "Cleaning the machine" on page 55).</li><li>• The paper path may need cleaning. Contact a service representative (see "Cleaning the machine" on page 55).</li></ul>
<p><b>Dropouts</b></p> 	<p>If faded areas, generally rounded, occur randomly on the page:</p> <ul style="list-style-type: none"><li>• A single sheet of paper may be defective. Try reprinting the job.</li><li>• The moisture content of the paper is uneven or the paper has moist spots on its surface. Try a different brand of paper.</li><li>• The paper lot is bad. The manufacturing processes can cause some areas to reject toner. Try a different kind or brand of paper.</li><li>• Change the printer option and try again. Go to <b>Printing Preferences</b>, click the <b>Paper</b> tab, and set type to <b>Thick</b> (see "Opening printing preferences" on page 37).</li></ul> <p>If these steps do not correct the problem, contact a service representative.</p>
<p><b>White Spots</b></p> 	<p>If white spots appear on the page:</p> <ul style="list-style-type: none"><li>• The paper is too rough and a lot of dirt from paper falls to the inner components within the machine, so the transfer roller may be dirty. Clean the inside of your machine (see "Cleaning the machine" on page 55).</li><li>• The paper path may need cleaning. Clean the inside of your machine (see "Cleaning the machine" on page 55).</li></ul> <p>If these steps do not correct the problem, contact a service representative.</p>

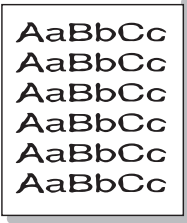
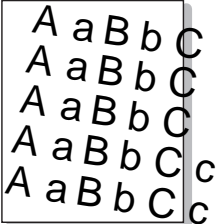
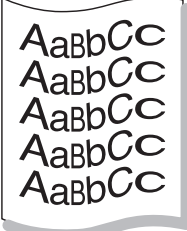
# Printing quality problems

Condition	Suggested solutions
<p><b>Vertical lines</b></p> 	<p>If black vertical streaks appear on the page:</p> <ul style="list-style-type: none"><li>• The surface (drum part) of the toner cartridge inside the machine has probably been scratched. Remove the toner cartridge and install a new one (see "Replacing the toner cartridge" on page 53).</li></ul> <p>If white vertical streaks appear on the page:</p> <ul style="list-style-type: none"><li>• The surface of the LSU part inside the machine may be dirty. Clean the inside of your machine (see "Cleaning the machine" on page 55). If these steps do not correct the problem, contact a service representative.</li></ul>
<p><b>Black or color background</b></p> 	<p>If the amount of background shading becomes unacceptable:</p> <ul style="list-style-type: none"><li>• Change to a lighter weight paper.</li><li>• Check the environmental conditions: very dry conditions or a high level of humidity (higher than 80% RH) can increase the amount of background shading.</li><li>• Remove the old toner cartridge and install a new one (see "Replacing the toner cartridge" on page 53).</li><li>• Thoroughly redistribute the toner (see "Redistributing toner" on page 51).</li></ul>
<p><b>Toner smear</b></p> 	<ul style="list-style-type: none"><li>• Clean the inside of the machine (see "Cleaning the machine" on page 55).</li><li>• Check the paper type and quality.</li><li>• Remove the toner cartridge and install a new one (see "Replacing the toner cartridge" on page 53).</li></ul>

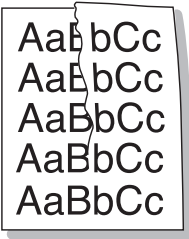
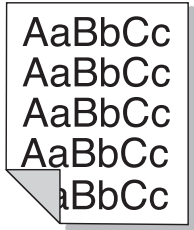
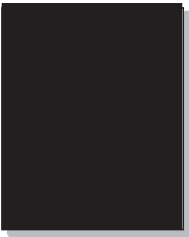
# Printing quality problems

Condition	Suggested solutions
<p data-bbox="49 272 405 304"><b>Vertical repetitive defects</b></p> 	<p data-bbox="504 272 1473 304">If marks repeatedly appear on the printed side of the page at even intervals:</p> <ul data-bbox="504 328 2190 544" style="list-style-type: none"><li data-bbox="504 328 2190 400">• The toner cartridge may be damaged. If you still have the same problem, remove the toner cartridge and, install a new one (see "Replacing the toner cartridge" on page 53).</li><li data-bbox="504 416 2190 488">• Parts of the machine may have toner on them. If the defects occur on the back of the page, the problem will likely correct itself after a few more pages.</li><li data-bbox="504 504 1464 544">• The fusing assembly may be damaged. Contact a service representative.</li></ul>
<p data-bbox="49 612 322 644"><b>Background scatter</b></p> 	<p data-bbox="504 612 1621 644">Background scatter results from bits of toner randomly distributed on the printed page.</p> <ul data-bbox="504 668 2190 1054" style="list-style-type: none"><li data-bbox="504 668 2190 740">• The paper may be too damp. Try printing with a different batch of paper. Do not open packages of paper until necessary so that the paper does not absorb too much moisture.</li><li data-bbox="504 756 2190 876">• If background scatter occurs on an envelope, change the printing layout to avoid printing over areas that have overlapping seams on the reverse side. Printing on seams can cause problems. Or select <b>Thick</b> from the <b>Printing Preferences</b> window (see "Opening printing preferences" on page 37).</li><li data-bbox="504 892 2190 1011">• If background scatter covers the entire surface area of a printed page, adjust the print resolution through your software application or in <b>Printing Preferences</b> (see "Opening printing preferences" on page 37). Ensure the correct paper type is selected. For example: If Thicker Paper is selected, but Plain Paper actually used, an overcharging can occur causing this copy quality problem.</li><li data-bbox="504 1027 1868 1054">• If you are using a new toner cartridge, redistribute the toner first (see "Redistributing toner" on page 51).</li></ul>
<p data-bbox="49 1086 479 1158"><b>Toner particles are around bold characters or pictures</b></p> 	<p data-bbox="504 1086 1249 1118">The toner might not adhere properly to this type of paper.</p> <ul data-bbox="504 1142 2190 1302" style="list-style-type: none"><li data-bbox="504 1142 2190 1214">• Change the printer option and try again. Go to <b>Printing Preferences</b>, click the <b>Paper</b> tab, and set the paper type to <b>Recycled</b> (see "Opening printing preferences" on page 37).</li><li data-bbox="504 1230 2190 1302">• Ensure the correct paper type is selected. For example: If Thicker Paper is selected, but Plain Paper actually used, an overcharging can occur causing this copy quality problem.</li></ul>

# Printing quality problems



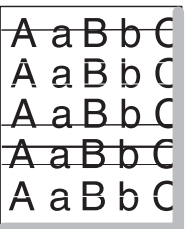
Condition	Suggested solutions
<p data-bbox="49 272 353 304"><b>Misformed characters</b></p> 	<ul data-bbox="504 272 2072 304" style="list-style-type: none"><li>• If characters are improperly formed and producing hollow images, the paper stock may be too slick. Try different paper.</li></ul>
<p data-bbox="49 608 203 639"><b>Page skew</b></p> 	<ul data-bbox="504 608 1518 743" style="list-style-type: none"><li>• Ensure that the paper is loaded properly.</li><li>• Check the paper type and quality.</li><li>• Ensure that the guides are not too tight or too loose against the paper stack.</li></ul>
<p data-bbox="49 951 230 983"><b>Curl or wave</b></p> 	<ul data-bbox="504 951 1729 1086" style="list-style-type: none"><li>• Ensure that the paper is loaded properly.</li><li>• Check the paper type and quality. Both high temperature and humidity can cause paper curl.</li><li>• Turn the stack of paper over in the tray. Also try rotating the paper 180° in the tray.</li></ul>

# Printing quality problems

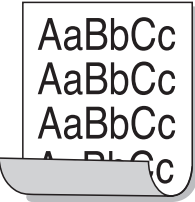
Condition	Suggested solutions
<p data-bbox="49 272 315 304"><b>Wrinkles or creases</b></p> 	<ul data-bbox="504 272 1594 411" style="list-style-type: none"><li>• Ensure that the paper is loaded properly.</li><li>• Check the paper type and quality.</li><li>• Turn the stack of paper over in the tray. Also try rotating the paper 180° in the tray.</li></ul>
<p data-bbox="49 619 412 651"><b>Back of printouts are dirty</b></p> 	<ul data-bbox="504 619 1787 651" style="list-style-type: none"><li>• Check for leaking toner. Clean the inside of the machine (see "Cleaning the machine" on page 55).</li></ul>
<p data-bbox="49 986 405 1018"><b>Solid color or black pages</b></p> 	<ul data-bbox="504 986 2159 1161" style="list-style-type: none"><li>• The toner cartridge may not be installed properly. Remove the cartridge and reinsert it.</li><li>• The toner cartridge may be defective. Remove the toner cartridge and install a new one (see "Replacing the toner cartridge" on page 53).</li><li>• The machine may require repairing. Contact a service representative.</li></ul>



# Printing quality problems

Condition	Suggested solutions
<p><b>Loose toner</b></p> 	<ul style="list-style-type: none"><li>• Clean the inside of the machine (see "Cleaning the machine" on page 55).</li><li>• Check the paper type and quality.</li><li>• Remove the toner cartridge and then, install a new one (see "Replacing the toner cartridge" on page 53).</li></ul> <p>If the problem persists, the machine may require repair. Contact a service representative.</p>
<p><b>Character voids</b></p> 	<p>Character voids are white areas within parts of characters that should be solid black:</p> <ul style="list-style-type: none"><li>• You may be printing on the wrong surface of the paper. Remove the paper and turn it around.</li><li>• The paper may not meet paper specifications.</li></ul>
<p><b>Horizontal stripes</b></p> 	<p>If horizontally aligned black streaks or smears appear:</p> <ul style="list-style-type: none"><li>• The toner cartridge may be installed improperly. Remove the cartridge and reinsert it.</li><li>• The toner cartridge may be defective. Remove the toner cartridge and install a new one (see "Replacing the toner cartridge" on page 53).</li></ul> <p>If the problem persists, the machine may require repairing. Contact a service representative.</p>

# Printing quality problems

Condition	Suggested solutions
<p><b>Curl</b></p> 	<p>If the printed paper is curled or paper does not feed into the machine:</p> <ul style="list-style-type: none"><li>• Turn the stack of paper over in the tray. Also try rotating the paper 180° in the tray.</li><li>• Change the printer's paper option and try again. Go to <b>Printing Preferences</b>, click the <b>Paper</b> tab, and set type to <b>Thin</b> (see "Opening printing preferences" on page 37).</li></ul>
<ul style="list-style-type: none"><li>• An unknown image repetitively appears on a few sheets</li><li>• Loose toner</li><li>• Light print or contamination occurs</li></ul>	<p>Your machine is probably being used at an altitude of 1,000 m (3,281 ft) or above. The high altitude may affect the print quality, such as loose toner or light imaging. Change the altitude setting for your machine (see "Altitude adjustment" on page 134).</p>

# Copying problems

Condition	Suggested solutions
<b>Copies are too light or too dark.</b>	Adjust the darkness in copy feature to lighten or darken the backgrounds of copies.
<b>Smears, lines, marks, or spots appear on copies.</b>	<ul style="list-style-type: none"><li>• If the defects are on the original, adjust darkness in copy feature to lighten the background of your copies.</li><li>• If there are no defects on the original, clean the scan unit (see "Cleaning the scan unit" on page 59).</li></ul>
<b>Copy image is skewed.</b>	<ul style="list-style-type: none"><li>• Ensure that the original is aligned with the registration guide.</li><li>• The transfer roller may be dirty. Clean the inside of your machine (see "Cleaning the machine" on page 55).</li></ul>
<b>Blank copies print out.</b>	Ensure that the original is face down on the scanner glass or face up in the document feeder. If these steps do not correct the problem, contact a service representative.
<b>Image rubs off the copy easily.</b>	<ul style="list-style-type: none"><li>• Replace the paper in the tray with paper from a new package.</li><li>• In high humidity areas, do not leave paper in the machine for extended periods of time.</li></ul>
<b>Frequent copy paper jams occur.</b>	<ul style="list-style-type: none"><li>• Fan the paper, then turn it over in the tray. Replace the paper in the tray with a fresh supply. Check/adjust the paper guides, if necessary.</li><li>• Ensure that the paper is the proper type and weight (see "Print media specifications" on page 73).</li><li>• Check for copy paper or pieces of copy paper remaining in the machine after a paper jam has been cleared.</li></ul>
<b>Toner cartridge produces fewer copies than expected before running out of toner.</b>	<ul style="list-style-type: none"><li>• Your originals may contain pictures, solids, or heavy lines. For example, your originals may be forms, newsletters, books, or other documents that use more toner.</li><li>• The scanner lid may be left open while copies are being made.</li><li>• Turn the machine off and back on.</li></ul>

# Scanning problems

Condition	Suggested solutions
<b>The scanner does not work.</b>	<ul style="list-style-type: none"><li>• Make sure that you place the original to be scanned face down on the scanner glass, or face up in the document feeder (see "Loading originals" on page 34).</li><li>• There may not be enough available memory to hold the document you want to scan. Try the Prescan function to see if that works. Try lowering the scan resolution rate.</li><li>• Check that the machine printer cable is connected properly.</li><li>• Make sure that the machine printer cable is not defective. Switch the printer cable with a known good cable. If necessary, replace the printer cable.</li></ul>
<b>The unit scans very slowly.</b>	<ul style="list-style-type: none"><li>• Check if the machine is printing received data. If so, scan the document after the received data has been printed.</li><li>• Graphics are scanned more slowly than text.</li><li>• Communication speed slows in scan mode because of the large amount of memory required to analyze and reproduce the scanned image. Set your computer to the ECP printer mode through BIOS setting. It will help to increase the speed. For details about how to set BIOS, refer to your computer user's guide.</li></ul>
<b>Message appears on your computer screen:</b> <ul style="list-style-type: none"><li>• Device can't be set to the H/W mode you want.</li><li>• Port is being used by another program.</li><li>• Port is disabled.</li><li>• Scanner is busy receiving or printing data. When the current job is completed, try again.</li><li>• Invalid handle.</li><li>• Scanning has failed.</li></ul>	<ul style="list-style-type: none"><li>• There may be a copying or printing job in progress. Try your job again when that job is finished.</li><li>• The selected port is currently being used. Restart your computer and try again.</li><li>• The machine printer cable may be improperly connected or the power may be off.</li><li>• The scanner driver is not installed or the operating environment is not set up properly.</li><li>• Ensure that the machine is properly connected and the power is on, then restart your computer.</li><li>• The USB cable may be improperly connected or the power may be off.</li></ul>

# Operating system problems

## Common Windows problems


Condition	Suggested solutions
<b>“File in Use” message appears during installation.</b>	Exit all software applications. Remove all software from the startup group, then restart Windows. Reinstall the printer driver.
<b>“General Protection Fault”, “Exception OE”, “Spool 32”, or “Illegal Operation” messages appear.</b>	Close all other applications, reboot Windows and try printing again.
<b>“Fail To Print”, “A printer timeout error occurred” message appear.</b>	These messages may appear during printing. Just keep waiting until the machine finishes printing. If the message appears in ready mode or after printing has completed, check the connection and/or whether an error has occurred.



Refer to the Microsoft Windows User's Guide that came with your computer for further information on Windows error messages.

# Operating system problems

## Common Mac problems

Condition	Suggested solutions
<b>The machine does not print PDF files correctly. Some parts of graphics, text, or illustrations are missing.</b>	<p>Printing the PDF file as an image may enable the file to print. Turn on <b>Print As Image</b> from the Acrobat printing options.</p> <p> It will take longer to print when you print a PDF file as an image.</p>
<b>Some letters are not displayed normally during cover page printing.</b>	<p>Mac OS cannot create the font while printing the cover page. The English alphabet and numbers are displayed normally on the cover page.</p>
<b>When printing a document in Mac with Acrobat Reader 6.0 or higher, colors print incorrectly.</b>	<p>Make sure that the resolution setting in your machine driver matches the one in Acrobat Reader.</p>



Refer to the Mac User's Guide that came with your computer for further information on Mac error messages.

# Operating system problems

## Common Linux problems

Condition	Suggested solutions
<b>The machine does not print.</b>	<ul style="list-style-type: none"><li>• Check if the printer driver is installed in your system. Open Unified Driver Configurator and switch to the <b>Printers</b> tab in the <b>Printers configuration</b> window to look at the list of available machines. Make sure that your machine is displayed on the list. If not, open <b>Add new printer wizard</b> to set up your device.</li><li>• Check if the machine is started. Open <b>Printers configuration</b> and select your machine from the printers list. Look at the description in the <b>Selected printer</b> pane. If its status contains <b>Stopped</b>, press the <b>Start</b> button. Normal operation of the machine should be restored. The “stopped” status might be activated when some problems in printing occur.</li><li>• Check if your application has special print options such as “-oraw”. If “-oraw” is specified in the command line parameter, then remove it to print properly. For Gimp front-end, select “print” -&gt; “Setup printer” and edit the command line parameter in the command item.</li></ul>
<b>Some color images come out all black.</b>	<p>This is a known bug in Ghostscript (until GNU Ghostscript version 7.05) when the base color space of the document is indexed color space and it is converted through CIE color space. Because Postscript uses CIE color space for Color Matching System, you should upgrade Ghostscript on your system to at least GNU Ghostscript version 7.06 or later. You can find recent Ghostscript versions at <a href="http://www.ghostscript.com">www.ghostscript.com</a>.</p>
<b>Some color images come out in unexpected color.</b>	<p>This is a known bug in Ghostscript (until GNU Ghostscript version 7.xx) when the base color space of the document is indexed RGB color space and it is converted through CIE color space. Because Postscript uses CIE color space for Color Matching System, you should upgrade Ghostscript on your system to at least GNU Ghostscript version 8.xx or later. You can find recent Ghostscript versions at <a href="http://www.ghostscript.com">www.ghostscript.com</a>.</p>
<b>The machine does not print whole pages, and output is printed on half the page.</b>	<p>It is a known problem that occurs when a color machine is used on version 8.51 or earlier of Ghostscript, 64-bit Linux OS, and has been reported to <a href="http://bugs.ghostscript.com">bugs.ghostscript.com</a> as Ghostscript Bug 688252. The problem is solved in AFPL Ghostscript v. 8.52 or above. Download the latest version of AFPL Ghostscript from <a href="http://sourceforge.net/projects/ghostscript/">http://sourceforge.net/projects/ghostscript/</a> and install it to solve this problem.</p>

# Operating system problems

Condition	Suggested solutions
<b>I cannot scan via Gimp Front-end.</b>	<p>Check if Gimp Front-end has Xsane:Device dialog. on the Acquire menu. If not, you should install Xsane plug-in for Gimp on the your computer. You can find Xsane plug-in package for Gimp on Linux distribution CD or Gimp home page. For the detailed information, refer to the Help for Linux distribution CD or Gimp Front-end application.</p> <p>If you wish to use another kind of scan application, refer to application's Help.</p>
<b>"Cannot open port device file" error message appears when printing a document.</b>	<p>Avoid changing print job parameters (e.g., via LPR GUI) while a print job is in progress. Known versions of CUPS server break the print job whenever print options are changed and then try to restart the job from the beginning. Since Unified Linux Driver locks the port while printing, the abrupt termination of the driver keeps the port locked and unavailable for subsequent print jobs. If this situation occurs, try to release the port by selecting <b>Release port</b> in the <b>Port configuration</b> window.</p>
<b>The machine does not appear on the scanners list.</b>	<ul style="list-style-type: none"><li>• Ensure your machine is attached to your computer, connected properly via the USB port, and is turned on.</li><li>• Ensure the scanner driver for your machine is installed in your system. Open Unified Linux Driver configurator, switch to Scanners configuration, then press Drivers. Make sure that driver with a name corresponding to your machine's name is listed in the window.</li><li>• Ensure the port is not busy. Since functional components of machine (printer and scanner) share the same I/O interface (port), the situation of simultaneous access of different user applications to the same port is possible. To avoid possible conflicts, only one of them at a time is allowed to gain control over the device. The other user will encounter "device busy" response. This usually happens when starting a scan procedure. An appropriate message box appears.</li></ul> <p>To identify the source of the problem, open the Ports configuration and select the port assigned to your scanner, port's symbol /dev/mfp0 corresponds to LP:0 designation displayed in the scanners' options, /dev/mfp1 relates to LP:1, and so on. USB ports start at /dev/mfp4, so scanner on USB:0 relates to /dev/mfp4 respectively and so forth sequentially. In the Selected port pane, you can see if the port is occupied by another application. If this is the case, you should either wait for completion of the current job or press the Release port button, if you are sure that the present port application is not functioning properly.</p>
<b>The machine does not scan.</b>	<ul style="list-style-type: none"><li>• Ensure a document is loaded into the machine, ensure your machine is connected to the computer.</li><li>• If there is an I/O error while scanning.</li></ul>



# Operating system problems



Refer to the Linux User's Guide that came with your computer for further information on Linux error messages.

## Common PostScript problems

The following situations are PS language specific and may occur when several printer languages are used.

Problem	Possible cause	Solution
<b>The PostScript file cannot be printed</b>	The PostScript driver may not be installed correctly.	<ul style="list-style-type: none"><li>• Install the PostScript driver (see "Software Installation" on page 96).</li><li>• Print a configuration page and verify that the PS version is available for printing.</li><li>• If the problem persists, contact a service representative.</li></ul>
<b>Limit Check Error report prints</b>	The print job was too complex.	You might need to reduce the complexity of the page or install more memory.
<b>A PostScript error page prints</b>	The print job may not be PostScript.	Make sure that the print job is a PostScript job. Check to see whether the software application expected a setup or PostScript header file to be sent to the machine.
<b>The optional tray is not selected in the driver</b>	The printer driver has not been configured to recognize the optional tray.	Open the PostScript driver properties, select the <b>Device Options</b> tab, and set the tray option.
<b>When printing a document in Mac with Acrobat Reader 6.0 or higher, colors print incorrectly</b>	The resolution setting in the printer driver may not be matched with the one in Acrobat Reader.	Make sure that the resolution setting in your printer driver matches the one in Acrobat Reader.



The following glossary helps you get familiar with the product by understanding the terminologies commonly used with printing as well as mentioned in this user's guide.

## 802.11

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802.11 is a set of standards for wireless local area network (WLAN) communication, developed by the IEEE LAN/MAN Standards Committee (IEEE 802).

## 802.11b/g/n

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802.11b/g/n can share same hardware and use the 2.4 GHz band. 802.11b supports bandwidth up to 11 Mbps, 802.11n supports bandwidth up to 150 Mbps. 802.11b/g/n devices may occasionally suffer interference from microwave ovens, cordless telephones, and Bluetooth devices.

## Access point

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Access Point or Wireless Access Point (AP or WAP) is a device that connects wireless communication devices together on wireless local area networks (WLAN), and acts as a central transmitter and receiver of WLAN radio signals.

## ADF

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An Automatic Document Feeder (ADF) is a scanning unit that will automatically feed an original sheet of paper so that the machine can scan some amount of the paper at once.

## AppleTalk

---

AppleTalk is a proprietary suite of protocols developed by Apple, Inc for computer networking. It was included in the original Mac (1984) and is now deprecated by Apple in favor of TCP/IP networking.

## BIT Depth

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A computer graphics term describing the number of bits used to represent the color of a single pixel in a bitmapped image. Higher color depth gives a broader range of distinct colors. As the number of bits increases, the number of possible colors becomes impractically large for a color map. 1-bit color is commonly called as monochrome or black and white.

## BMP

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A bitmapped graphics format used internally by the Microsoft Windows graphics subsystem (GDI), and used commonly as a simple graphics file format on that platform.

## BOOTP

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Bootstrap Protocol. A network protocol used by a network client to obtain its IP address automatically. This is usually done in the bootstrap process of computers or operating systems running on them. The BOOTP servers assign the IP address from a pool of addresses to each client. BOOTP enables 'diskless workstation' computers to obtain an IP address prior to loading any advanced operating system.

## CCD

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Charge Coupled Device (CCD) is a hardware which enables the scan job. CCD Locking mechanism is also used to hold the CCD module to prevent any damage when you move the machine.

## Collation

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Collation is a process of printing a multiple-copy job in sets. When collation is selected, the device prints an entire set before printing additional copies.

## Control Panel

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A control panel is a flat, typically vertical, area where control or monitoring instruments are displayed. They are typically found in front of the machine.

## Coverage

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It is the printing term used for a toner usage measurement on printing. For example, 5% coverage means that an A4 sided paper has about 5% image or text on it. So, if the paper or original has complicated images or lots of text on it, the coverage will be higher and at the same time, a toner usage will be as much as the coverage.

## CSV

---

Comma Separated Values (CSV). A type of file format, CSV is used to exchange data between disparate applications. The file format, as it is used in Microsoft Excel, has become a de facto standard throughout the industry, even among non-Microsoft platforms.

## DADF

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A Duplex Automatic Document Feeder (DADF) is a scanning unit that will automatically feed and turn over an original sheet of paper so that the machine can scan on both sides of the paper.

## Default

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The value or setting that is in effect when taking a printer out of its box state, reset, or initialized.

## DHCP

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A Dynamic Host Configuration Protocol (DHCP) is a client-server networking protocol. A DHCP server provides configuration parameters specific to the DHCP client host requesting, generally, information required by the client host to participate on an IP network. DHCP also provides a mechanism for allocation of IP addresses to client hosts.

## DIMM

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Dual Inline Memory Module (DIMM), a small circuit board that holds memory. DIMM stores all the data within the machine like printing data, received fax data.

## DLNA

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The Digital Living Network Alliance (DLNA) is a standard that allows devices on a home network to share information with each other across the network.

## DNS

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The Domain Name Server (DNS) is a system that stores information associated with domain names in a distributed database on networks, such as the Internet.

## Dot Matrix Printer

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A dot matrix printer refers to a type of computer printer with a print head that runs back and forth on the page and prints by impact, striking an ink-soaked cloth ribbon against the paper, much like a typewriter.

## DPI

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Dots Per Inch (DPI) is a measurement of resolution that is used for scanning and printing. Generally, higher DPI results in a higher resolution, more visible detail in the image, and a larger file size.

## DRPD

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Distinctive Ring Pattern Detection. Distinctive Ring is a telephone company service which enables a user to use a single telephone line to answer several different telephone numbers.

## Duplex

---

A mechanism that will automatically turn over a sheet of paper so that the machine can print (or scan) on both sides of the paper. A printer equipped with a Duplex Unit can print on both sides of paper during one print cycle.

## Duty Cycle

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Duty cycle is the page quantity which does not affect printer performance for a month. Generally the printer has the lifespan limitation such as pages per year. The lifespan means the average capacity of print-outs, usually within the warranty period. For example, if the duty cycle is 48,000 pages per month assuming 20 working days, a printer limits 2,400 pages a day.

## ECM

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Error Correction Mode (ECM) is an optional transmission mode built into Class 1 fax machines or fax modems. It automatically detects and corrects errors in the fax transmission process that are sometimes caused by telephone line noise.

## Emulation

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Emulation is a technique of one machine obtaining the same results as another.

An emulator duplicates the functions of one system with a different system, so that the second system behaves like the first system. Emulation focuses on exact reproduction of external behavior, which is in contrast to simulation, which concerns an abstract model of the system being simulated, often considering its internal state.

## Ethernet

---

Ethernet is a frame-based computer networking technology for local area networks (LANs). It defines wiring and signaling for the physical layer, and frame formats and protocols for the media access control (MAC)/data link layer of the OSI model. Ethernet is mostly standardized as IEEE 802.3. It has become the most widespread LAN technology in use during the 1990s to the present.

## EtherTalk

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A suite of protocols developed by Apple Computer for computer networking. It was included in the original Mac (1984) and is now deprecated by Apple in favor of TCP/IP networking.

## FDI

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Foreign Device Interface (FDI) is a card installed inside the machine to allow a third party device such as a coin operated device or a card reader. Those devices allow the pay-for-print service on your machine.

## FTP

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A File Transfer Protocol (FTP) is a commonly used protocol for exchanging files over any network that supports the TCP/IP protocol (such as the Internet or an intranet).

## Fuser Unit

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The part of a laser printer that fuses the toner onto the print media. It consists of a heat roller and a pressure roller. After toner is transferred onto the paper, the fuser unit applies heat and pressure to ensure that the toner stays on the paper permanently, which is why paper is warm when it comes out of a laser printer.

## Gateway

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A connection between computer networks, or between a computer network and a telephone line. It is very popular, as it is a computer or a network that allows access to another computer or network.

## Grayscale

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A shades of gray that represent light and dark portions of an image when color images are converted to grayscale; colors are represented by various shades of gray.

## Halftone

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An image type that simulates grayscale by varying the number of dots. Highly colored areas consist of a large number of dots, while lighter areas consist of a smaller number of dots.

## Mass storage device (HDD)

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Mass storage device (HDD), commonly referred to as a hard drive or hard disk, is a non-volatile storage device which stores digitally-encoded data on rapidly rotating platters with magnetic surfaces.

## IEEE

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The Institute of Electrical and Electronics Engineers (IEEE) is an international non-profit, professional organization for the advancement of technology related to electricity.

## IEEE 1284

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The 1284 parallel port standard was developed by the Institute of Electrical and Electronics Engineers (IEEE). The term "1284-B" refers to a specific connector type on the end of the parallel cable that attaches to the peripheral (for example, a printer).

## Intranet

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A private network that uses Internet Protocols, network connectivity, and possibly the public telecommunication system to securely share part of an organization's information or operations with its employees. Sometimes the term refers only to the most visible service, the internal website.

## IP address

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An Internet Protocol (IP) address is a unique number that devices use in order to identify and communicate with each other on a network utilizing the Internet Protocol standard.

## IPM

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The Images Per Minute (IPM) is a way of measuring the speed of a printer. An IPM rate indicates the number of single-sided sheets a printer can complete within one minute.

## IPP

---

The Internet Printing Protocol (IPP) defines a standard protocol for printing as well as managing print jobs, media size, resolution, and so forth. IPP can be used locally or over the Internet to hundreds of printers, and also supports access control, authentication, and encryption, making it a much more capable and secure printing solution than older ones.

## IPX/SPX

---

IPX/SPX stands for Internet Packet Exchange/Sequenced Packet Exchange. It is a networking protocol used by the Novell NetWare operating systems. IPX and SPX both provide connection services similar to TCP/IP, with the IPX protocol having similarities to IP, and SPX having similarities to TCP. IPX/SPX was primarily designed for local area networks (LANs), and is a very efficient protocol for this purpose (typically its performance exceeds that of TCP/IP on a LAN).

## ISO

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The International Organization for Standardization (ISO) is an international standard-setting body composed of representatives from national standards bodies. It produces world-wide industrial and commercial standards.

## ITU-T

---

The International Telecommunication Union is an international organization established to standardize and regulate international radio and telecommunications. Its main tasks include standardization, allocation of the radio spectrum, and organizing interconnection arrangements between different countries to allow international phone calls. A -T out of ITU-T indicates telecommunication.

## ITU-T No. 1 chart

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Standardized test chart published by ITU-T for document facsimile transmissions.

## JBIG

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Joint Bi-level Image Experts Group (JBIG) is an image compression standard with no loss of accuracy or quality, which was designed for compression of binary images, particularly for faxes, but can also be used on other images.

## JPEG

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Joint Photographic Experts Group (JPEG) is a most commonly used standard method of lossy compression for photographic images. It is the format used for storing and transmitting photographs on the World Wide Web.

## LDAP

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The Lightweight Directory Access Protocol (LDAP) is a networking protocol for querying and modifying directory services running over TCP/IP.

## LED

---

A Light-Emitting Diode (LED) is a semiconductor device that indicates the status of a machine.

## MAC address

---

Media Access Control (MAC) address is a unique identifier associated with a network adapter. MAC address is a unique 48-bit identifier usually written as 12 hexadecimal characters grouped in pairs (e. g., 00-00-0c-34-11-4e). This address is usually hard-coded into a Network Interface Card (NIC) by its manufacturer, and used as an aid for routers trying to locate machines on large networks.

## MFP

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Multi Function Peripheral (MFP) is an office machine that includes the following functionality in one physical body, so as to have a printer, a copier, a fax, a scanner and etc.

## MH

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Modified Huffman (MH) is a compression method for decreasing the amount of data that needs to be transmitted between the fax machines to transfer the image recommended by ITU-T T.4. MH is a codebook-based run-length encoding scheme optimized to efficiently compress white space. As most faxes consist mostly of white space, this minimizes the transmission time of most faxes.

## MMR

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Modified Modified READ (MMR) is a compression method recommended by ITU-T T.6.

## Modem

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A device that modulates a carrier signal to encode digital information, and also demodulates such a carrier signal to decode transmitted information.

## MR

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Modified Read (MR) is a compression method recommended by ITU-T T.4. MR encodes the first scanned line using MH. The next line is compared to the first, the differences determined, and then the differences are encoded and transmitted.



## NetWare

---

A network operating system developed by Novell, Inc. It initially used cooperative multitasking to run various services on a PC, and the network protocols were based on the archetypal Xerox XNS stack. Today NetWare supports TCP/IP as well as IPX/SPX.

## OPC

---

Organic Photo Conductor (OPC) is a mechanism that makes a virtual image for print using a laser beam emitted from a laser printer, and it is usually green or rust colored and has a cylinder shape.

An imaging unit containing a drum slowly wears the drum surface by its usage in the printer, and it should be replaced appropriately since it gets worn from contact with the cartridge development brush, cleaning mechanism, and paper.

## Originals

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The first example of something, such as a document, photograph or text, etc, which is copied, reproduced or translated to produce others, but which is not itself copied or derived from something else.

## OSI

---

Open Systems Interconnection (OSI) is a model developed by the International Organization for Standardization (ISO) for communications. OSI offers a standard, modular approach to network design that divides the required set of complex functions into manageable, self-contained, functional layers. The layers are, from top to bottom, Application, Presentation, Session, Transport, Network, Data Link and Physical.

## PABX

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A private automatic branch exchange (PABX) is an automatic telephone switching system within a private enterprise.

## PCL

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Printer Command Language (PCL) is a Page Description Language (PDL) developed by HP as a printer protocol and has become an industry standard. Originally developed for early inkjet printers, PCL has been released in varying levels for thermal, dot matrix printer, and laser printers.

## PDF

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Portable Document Format (PDF) is a proprietary file format developed by Adobe Systems for representing two dimensional documents in a device independent and resolution independent format.

## PostScript

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PostScript (PS) is a page description language and programming language used primarily in the electronic and desktop publishing areas. - that is run in an interpreter to generate an image.

## Printer Driver

---

A program used to send commands and transfer data from the computer to the printer.

## Print Media

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The media like paper, envelopes, labels, and transparencies which can be used in a printer, a scanner, a fax or, a copier.

## PPM

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Pages Per Minute (PPM) is a method of measurement for determining how fast a printer works, meaning the number of pages a printer can produce in one minute.

## PRN file

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An interface for a device driver, this allows software to interact with the device driver using standard input/output system calls, which simplifies many tasks.

## Protocol

---

A convention or standard that controls or enables the connection, communication, and data transfer between two computing endpoints.

## PS

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See PostScript.

## PSTN

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The Public-Switched Telephone Network (PSTN) is the network of the world's public circuit-switched telephone networks which, on industrial premises, is usually routed through the switchboard.

## RADIUS

---

Remote Authentication Dial In User Service (RADIUS) is a protocol for remote user authentication and accounting. RADIUS enables centralized management of authentication data such as usernames and passwords using an AAA (authentication, authorization, and accounting) concept to manage network access.

## Resolution

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The sharpness of an image, measured in Dots Per Inch (DPI). The higher the dpi, the greater the resolution.

## SMB

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Server Message Block (SMB) is a network protocol mainly applied to share files, printers, serial ports, and miscellaneous communications between nodes on a network. It also provides an authenticated Inter-process communication mechanism.

## SMTP

---

Simple Mail Transfer Protocol (SMTP) is the standard for e-mail transmissions across the Internet. SMTP is a relatively simple, text-based protocol, where one or more recipients of a message are specified, and then the message text is transferred. It is a client-server protocol, where the client transmits an email message to the server.

## SSID

---

Service Set Identifier (SSID) is a name of a wireless local area network (WLAN). All wireless devices in a WLAN use the same SSID in order to communicate with each other. The SSIDs are case-sensitive and have a maximum length of 32 characters.

## Subnet Mask

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The subnet mask is used in conjunction with the network address to determine which part of the address is the network address and which part is the host address.

## TCP/IP

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The Transmission Control Protocol (TCP) and the Internet Protocol (IP); the set of communications protocols that implement the protocol stack on which the Internet and most commercial networks run.

## TCR

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Transmission Confirmation Report (TCR) provides details of each transmission such as job status, transmission result and number of pages sent. This report can be set to print after each job or only after failed transmissions.

## TIFF

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Tagged Image File Format (TIFF) is a variable-resolution bitmapped image format. TIFF describes image data that typically come from scanners. TIFF images make use of tags, keywords defining the characteristics of the image that is included in the file. This flexible and platform-independent format can be used for pictures that have been made by various image processing applications.

## Toner Cartridge

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A kind of bottle or container used in a machine like a printer which contains toner. Toner is a powder used in laser printers and photocopiers, which forms the text and images on the printed paper. Toner can be fused by a combination of heat/pressure from the fuser, causing it to bind to the fibers in the paper.

## TWAIN

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An industry standard for scanners and software. By using a TWAIN-compliant scanner with a TWAIN-compliant program, a scan can be initiated from within the program. It is an image capture API for Microsoft Windows and Apple Mac operating systems.

## UNC Path

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Uniform Naming Convention (UNC) is a standard way to access network shares in Window NT and other Microsoft products. The format of a UNC path is:  
\\<servername>\<sharename>\<Additional directory>

## URL

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Uniform Resource Locator (URL) is the global address of documents and resources on the Internet. The first part of the address indicates what protocol to use, the second part specifies the IP address or the domain name where the resource is located.

## USB

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Universal Serial Bus (USB) is a standard that was developed by the USB Implementers Forum, Inc., to connect computers and peripherals. Unlike the parallel port, USB is designed to concurrently connect a single computer USB port to multiple peripherals.

## Watermark

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A watermark is a recognizable image or pattern in paper that appears lighter when viewed by transmitted light. Watermarks were first introduced in Bologna, Italy in 1282; they have been used by papermakers to identify their product, and also on postage stamps, currency, and other government documents to discourage counterfeiting.

## WEP

---

Wired Equivalent Privacy (WEP) is a security protocol specified in IEEE 802.11 to provide the same level of security as that of a wired LAN. WEP provides security by encrypting data over radio so that it is protected as it is transmitted from one end point to another.

## WIA

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Windows Imaging Architecture (WIA) is an imaging architecture that is originally introduced in Windows Me and Windows XP. A scan can be initiated from within these operating systems by using a WIA-compliant scanner.

## WPA

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Wi-Fi Protected Access (WPA) is a class of systems to secure wireless (Wi-Fi) computer networks, which was created to improve upon the security features of WEP.

## WPA-PSK

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WPA-PSK (WPA Pre-Shared Key) is special mode of WPA for small business or home users. A shared key, or password, is configured in the wireless access point (WAP) and any wireless laptop or desktop devices. WPA-PSK generates a unique key for each session between a wireless client and the associated WAP for more advanced security.

## WPS

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The Wi-Fi Protected Setup (WPS) is a standard for establishing a wireless home network. If your wireless access point supports WPS, you can configure the wireless network connection easily without a computer.

## XPS

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XML Paper Specification (XPS) is a specification for a Page Description Language (PDL) and a new document format, which has benefits for portable document and electronic document, developed by Microsoft. It is an XML-based specification, based on a new print path and a vector-based device-independent document format.

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