

User's Guide

Samsung Multifunction **MultiXpress**

K220x series

K220xND series



1. Introduction

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

- **Key benefits**
- **Features by model**
- **About this user's guide**
- **Safety information**
- **Machine overview**
- **Control panel overview**

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Key benefits

Environmentally friendly



- To save toner and paper, this machine supports Eco feature see "Eco printing" on page 78).
- To save paper, you can print multiple pages on one single sheet of paper.
- To save paper, you can print on both sides of the paper (double-sided printing).
- 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 x 1bit dpi effective output (600 x 600 x 2 bit).
- Fast, on-demand printing.
 - For single-side printing, 20 ppm(A4/Letter).

Convenience



You can use various tools to conveniently print documents, manage files, and control the machine.

- Easy Capture Manager allows you to easily edit and print whatever you captured using the Print Screen key on the keyboard (see "Printing with Easy Capture Manager" on page 78).
- Samsung Easy 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 Samsung Printer Status" on page 74 or "Using Samsung Easy Printer Manager" on page 137).
- Samsung Easy Document Creator 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 (see "Using Samsung Easy Document Creator" on page 136).
- Smart Update allows you to check for the latest software and install the latest version during the printer driver installation process. This is available only for Windows.
- If you have Internet access, you can get help, support application, machine drivers, manuals, and order information from the Samsung website, www.samsung.com > find your product > Support or Downloads.

Features by model

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

Variety feature

Features	K220x series	K220xND series
Hi-Speed USB 2.0	●	●
Network Interface Ethernet 10/100 Base TX wired LAN		●
Eco printing	●	●
Duplex (2-sided) printing		●
Duplex (2-sided) printing (manual) ^{ab}	●	
Second Cassette Feeder (Tray2)		○
Reverse Automatic Document Feeder (RADF)		○
Scan	●	●
Copy	●	●

a. Available for Windows OS only.

b. Only tray 1 is supported.

(●: Included, ○: Optional, Blank: Not available)

Features by model

Software

Software		K220x series	K220xND series
SPL printer driver		●	●
PCL printer driver			●
XPS printer driver ^a		●	●
Samsung Easy Printer Manager	Scan to PC Settings	●	●
	Device Settings	●	●
Samsung Printer Status		●	●
Samsung AnyWeb Print ^a		●	●
Samsung Easy Document Creator		●	●
Easy Capture Manager		●	●
SyncThru™ Web Service			●
SyncThru Admin Web Service			●
Easy Eco Driver		●	●
Scan	Twain scan driver	●	●
	WIA scan driver	●	●

a. You can download the software from the Samsung website and install it: (<http://www.samsung.com> > find your product > Support or Downloads). Before installing, check whether your computer's OS support the software.

(●: Included, Blank: Not available)

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 user'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.
- Document is synonymous with original.
- Paper is synonymous with media, or print media.
- Machine in this user's guide refers to printer or MFP.

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.



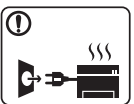
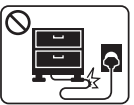

Important safety symbols

Explanation of all icons and signs used in this chapter

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







Operating environment

Warning

	<p>Do not use if the power cord is damaged or if the electrical outlet is not grounded.</p> <p>This could result in electric shock or fire.</p>
	<p>Do not place anything on top of the machine (water, small metal or heavy objects, candles, lit cigarettes, etc.).</p> <p>This could result in electric shock or fire.</p>
	<ul style="list-style-type: none">• 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. <p>This could result in electric shock or fire.</p>
	<p>Do not bend, or place heavy objects on the power cord.</p> <p>Stepping on or allowing the power cord to be crushed by a heavy object could result in electric shock or fire.</p>
	<p>Do not remove the plug by pulling on the cord; do not handle the plug with wet hands.</p> <p>This could result in electric shock or fire.</p>







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


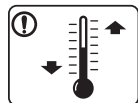
	<p>Do not forcefully pull the paper out during printing.</p> <p>It can cause damage to the machine.</p>
	<p>Be careful not to put your hand between the machine and paper tray.</p> <p>You may get injured.</p>
	<p>Be careful when replacing paper or removing jammed paper.</p> <p>New paper has sharp edges 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


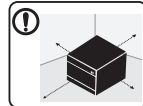


	Do not block or push objects into the ventilation opening. This could result in elevated component temperatures which can cause damage or fire.
	Use of controls or adjustments or performance of procedures other than those specified herein may result in hazardous radiation exposure.
	This machine's power 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.
	Place the machine in the environment where it meets the operating temperature and humidity specification. Otherwise, quality problems can occur and cause damage to the machine. See "General specifications" on page 179.

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 safely. Then lift the machine: <ul style="list-style-type: none">• If the machine weighs under 20 kg (44.09 lbs), lift with 1 person.• If the machine weighs 20 kg (44.09 lbs) - 40kg (88.18 lbs), lift with 2 people.• If the machine weighs more than 40 kg (88.18 lbs), lift with 4 or more people. 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 ^a 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 consumables or cleaning the inside, do not operate the machine. You could get injured.
	Keep cleaning consumables 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">• Do not remove any covers or guards that are fastened with screws.• Fuser units should only be repaired by a certified service technician. Repair by non-certified technicians could result in fire or electric shock.• The machine should only be repaired by a Samsung service technician.

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 consumables such as toner cartridge or fuser unit.</p> <p>This could cause an explosion or uncontrollable fire.</p>

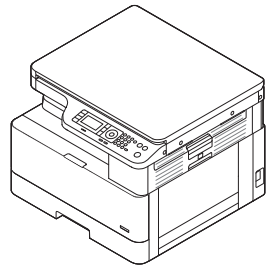
	<p>When storing consumables such as toner cartridges, keep them away from children.</p> <p>Toner dust can be dangerous if inhaled or ingested.</p>
	<p>Using recycled consumables, such as toner, can cause damage to the machine.</p> <p>In case of damage due to the use of recycled consumables, a service fee will be charged.</p>
	<p>For consumables that contain toner dust (toner cartridge, waste toner bottle, imaging unit, etc.) follow the instructions below.</p> <ul style="list-style-type: none">• When disposing of the consumables, follow the instructions for disposal. Refer to the reseller for disposal instructions.• Do not wash the consumables.• For a waste toner bottle, do not reuse it after emptying the bottle. <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

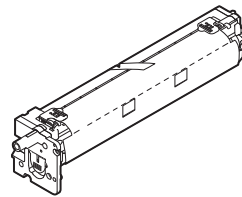


- This illustration may differ from your machine depending on your model. There are various types of machine.
- Some features and optional goods may not be available depending on model or country

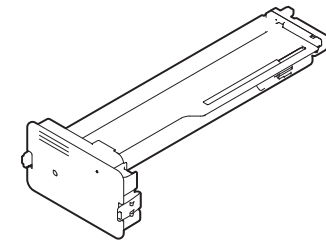
Components



Machine



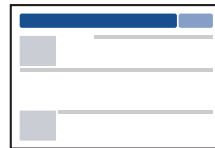
Imaging unit



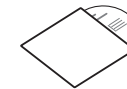
Toner cartridge^a



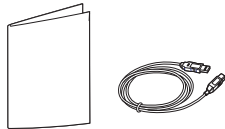
Power cord



Quick installation guide



Software CD

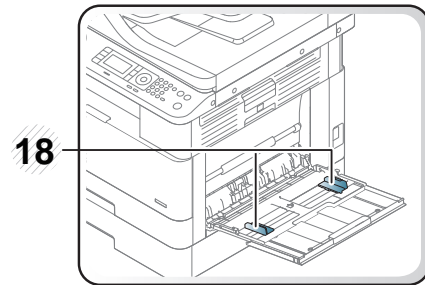
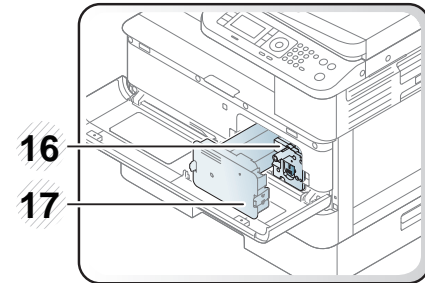
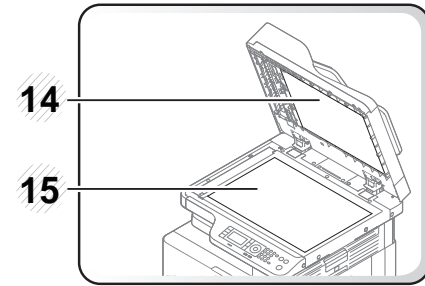
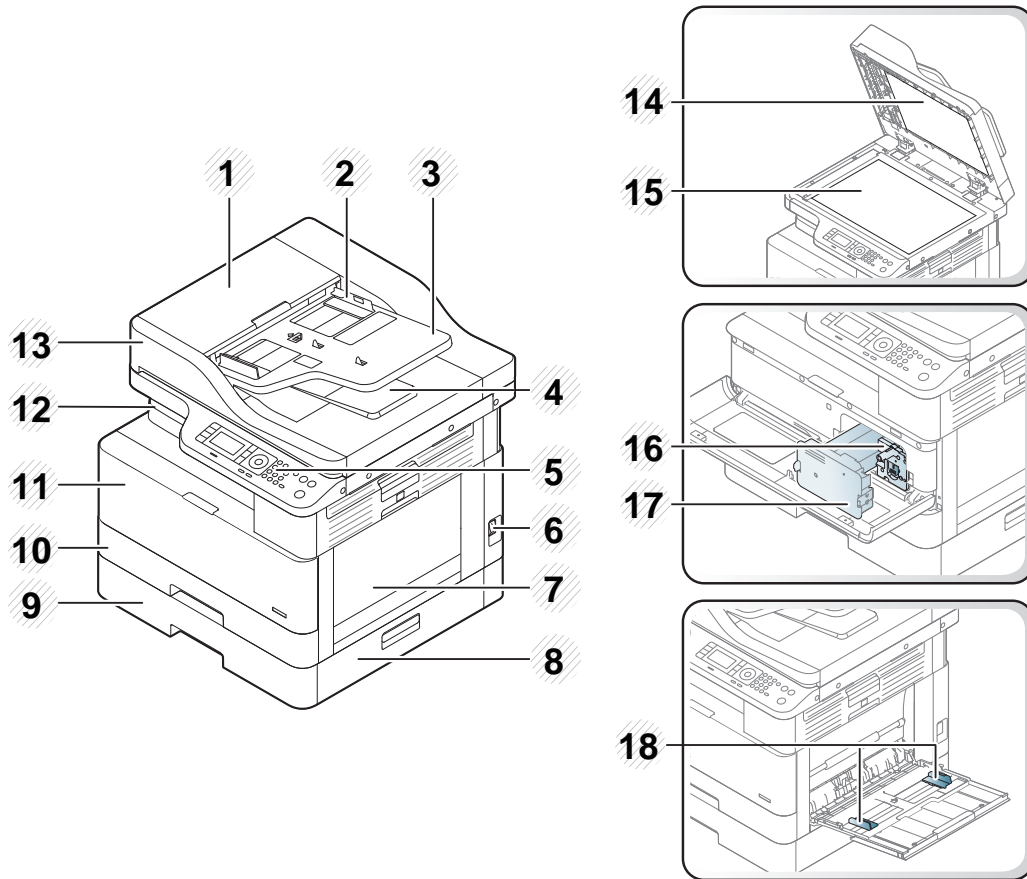


Misc. accessories^a

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

Machine overview

Front view



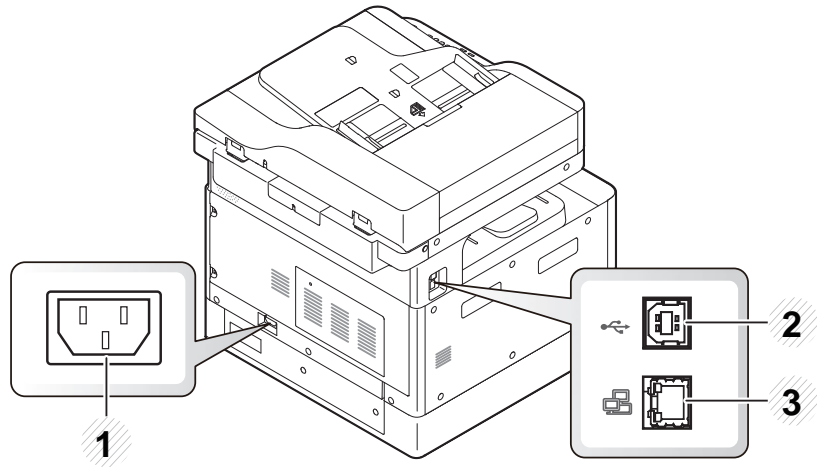
2	Reverse automatic document feeder width guide ^a	11	Front cover
3	Reverse automatic document feeder input tray ^a	12	Output tray
4	Reverse automatic document feeder output tray ^a	13	Reverse automatic document feeder ^a
5	Control panel	14	Scanner lid
6	Power-switch	15	Scanner glass
7	Multi-purpose tray	16	Imaging unit
8	Tray 2 jam cover ^a	17	Toner cartridge
9	Second Cassette Feeder (Tray 2) ^a	18	Paper width guides on a multi-purpose tray

a. This is an optional feature (see "Variety feature" on page 7).

1	Reverse automatic document feeder cover ^a	10	Tray 1
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Machine overview

Rear view



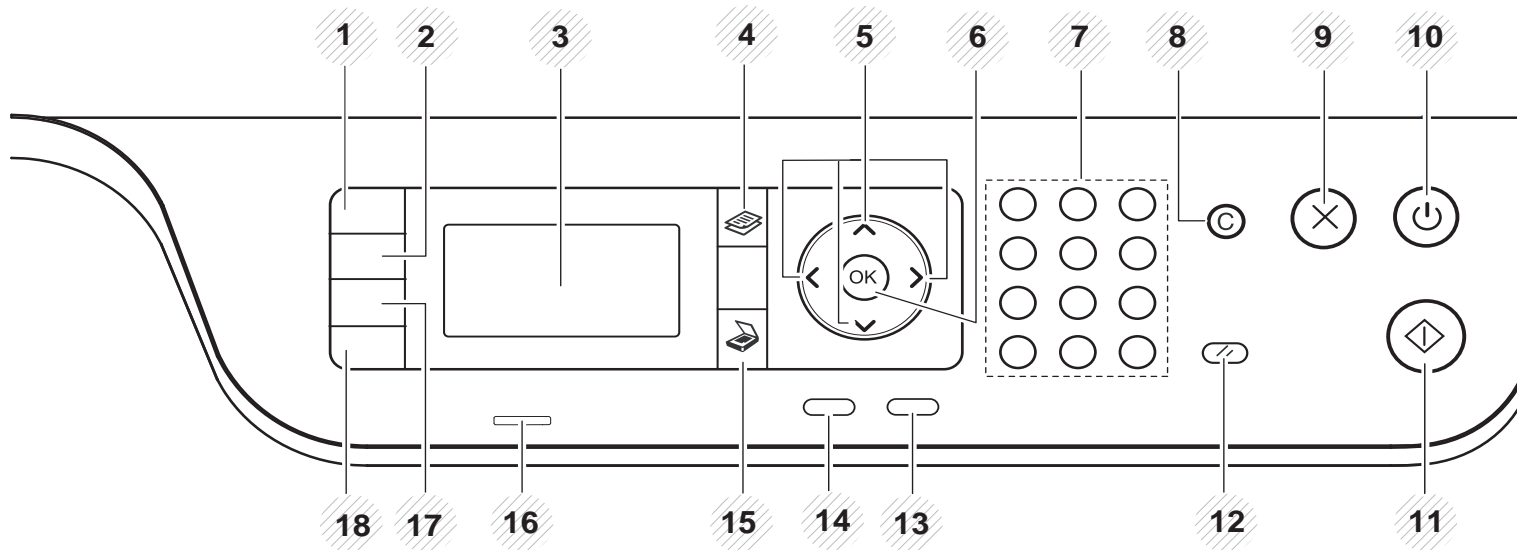
- | | |
|---|---------------------------|
| 1 | Power receptacle |
| 2 | USB port |
| 3 | Network port ^a |


a. K220xND series only.

Control panel overview











- This control panel may differ from your machine depending on its model. There are various types of control panels.
- Some features and optional goods may not be available depending on model or country (see "Features by model" on page 7).
- Some buttons may not work depending on the mode (copy or scan).



1	ID Copy		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 88).
2	Reduce/Enlarge		You can reduce or enlarge the size of a copied image from 25% to 400% when you copy original documents from the scanner glass. (see "Reduced or enlarged copy" on page 86).
3	Display screen		Shows the current status and prompts during an operation.
4	Copy		Switches to Copy mode.
5	Arrows		Scroll through the options available in the selected menu, and increase or decrease values.

Control panel overview

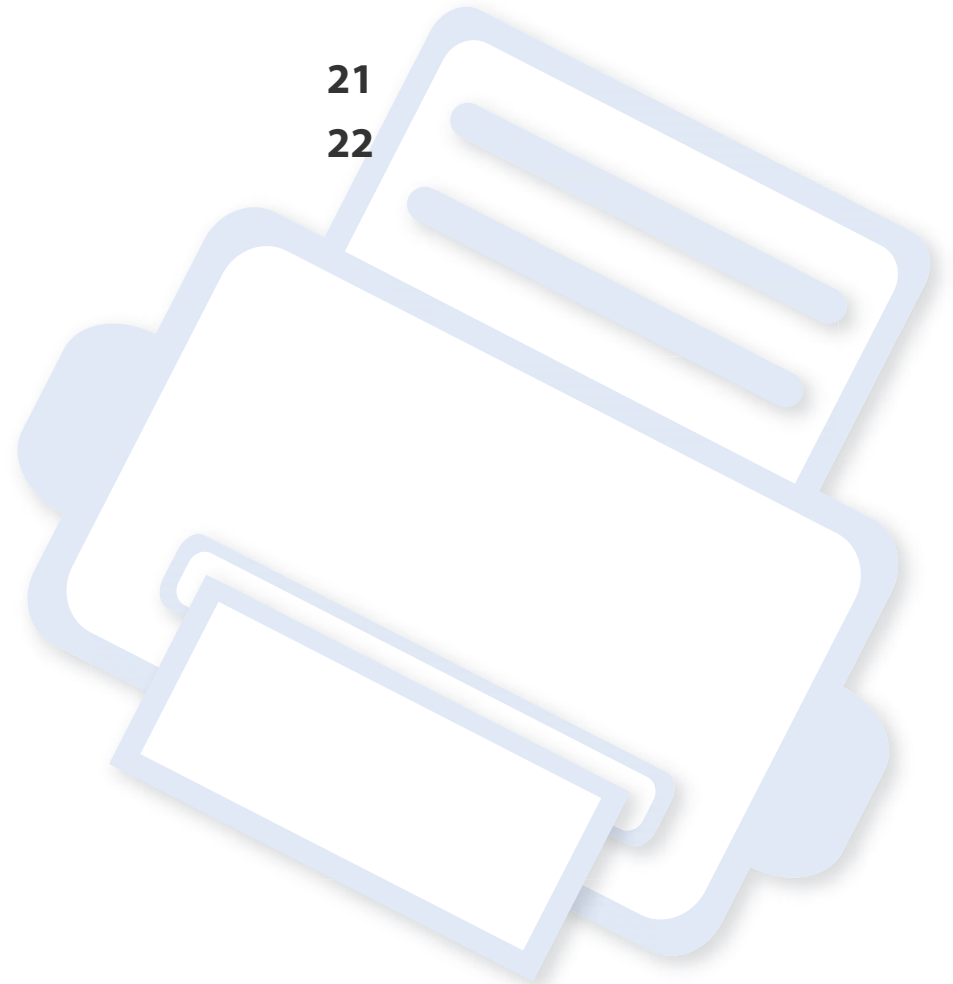
6	OK		Confirms the selection on the screen.
7	Numeric keypad		Enter the number of copies.
8	Clear		Reset the number of copies.
9	Stop		Stops current operation.
10	Power / Wake Up		Turns the power on or off, or wakes up the machine from the power save mode. If you need to turn the machine off, press this button for more than three seconds.
11	Start		Begins a copying job.
12	Reset		Reset the copy settings to default values.
13	Back		Sends you back to the upper menu level.
14	Menu		Enters Menu mode and scrolls through the available menus (see "Accessing the menus" on page 21).
15	Scan		Switches to Scan mode.
16	Status LED		Indicates the status of your machine (see "Understanding the status LED" on page 153).
17	Paper Select		Select the tray you want from the display screen.
18	Darkness		Adjusts the brightness level to make a copy for easier reading, when the original contains faint markings and dark images.



2. Menu Overview



This chapter provides information about the overall menu structure.

- **Accessing the menus** 21
- **Menu overview** 22



Accessing the menus

Some menus may not appear on the display depending on the options selected, the product model, or your country of residence. If so, it is not applicable to your machine.

- 1 Select the Copy, or Scan button on the control panel depending on the feature to be used.
- 2 Select  (**Menu**) until the menu you want appears on the bottom line of the display and press **OK**.
- 3 Press the arrows until the needed menu item appears and press **OK**.
- 4 If the setting item has sub menus, repeat step 3.
- 5 Press **OK** to save the selection.
- 6 Press  (**Stop**) button to return to the ready mode.

Menu overview



- An checked (✓) appears next to the currently selected menu.
- Some menus may not appear on the display depending on options or models. If so, it is not applicable to your machine.
- Some menu names may differ from your machine depending on its options or the models.

Copy Feature Menu

Copy Feature (see "Copy feature" on page 82)		
Paper Select	Darkness	Layout
Reduce/Enlarge	Original Type	Normal
Duplex^a	Text	ID Copy
1->1 Sided	Text/Photo	N-Up
1->2 Sided, Book	Photo	Book Copy
1->2 Sided, Calendar	Map	Adjust Background
2->1 Sided, Book	Image Rotation^a	Off
2->1 Sided, Calendar	Collation	Auto
2->2 Sided, Book->Book		Enhance Lev.1
2->2 Sided, Calendar->Calendar		Enhance Lev.2
2->2 Sided, Book->Calendar		Erase Lev.1- Erase Lev.4
2->2 Sided, Calendar->Book		

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

Menu overview

Copy Setup Menu

Copy Setup (see "Copy Setup" on page 84)

Change Default

Paper Select

Copies

Reduce/Enlarge

Duplex^a

1->1 Sided

1->2 Sided, Book

1->2 Sided, Calendar

2->1 Sided, Book

2->1 Sided, Calendar

2->2 Sided, Book->Book

**2->2 Sided, Calendar-
>Calendar**

2->2 Sided, Book->Calendar

2->2 Sided, Calendar->Book

Darkness

Light+5- Light+1

Normal

Dark+1- Dark+5

Original Type

Text

Text/Photo

Photo

Map

Image Rotation^a

Collation

Auto Tray^a

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

Menu overview

Print Setup Menu (K220xND series only)

Print Setup

(see "Print setup on the control panel" on page 59)

Orientation

Portrait

Landscape

Duplex

Copies

Resolution

Clear Text

Off

Minimum

Normal

Maximum

Auto CR

Skip Blank Pages

Emulation

Setup

Menu overview

System Setup Menu

System Setup (see "System and Other Settings" on page 100)

Machine Setup

- Date & Time
- Clock Mode
- Language
- Power Save
- Wakeup Event
- Auto Power Off
- System Timeout
- Job Timeout
- Altitude Adjustment
- Humidity
- Auto Continue
- Auto Tray Switch
- Paper Substitution
- Tray Protection
- Eco Settings

Paper Setup

- Paper Size
 - Tray 1
 - Tray 2^a
- MP Tray
- Default Paper Size
- Paper Type
 - Tray 1
 - Tray 2^a
- MP Tray
- Paper Select
- Margin
- Tray Confirmation

Report

- Configuration
 - Demo Page A4
 - Demo Page Letter
 - Demo Page A3
 - Demo Page Ledger
- Network Configuration^a
- Supplies Information
- Usage Counter
- PCL Font^a

Maintenance

- CLR Empty Msg.^b
- Supplies Life
- Image Mgr.
 - Custom Color
- Toner Low Alert
- OPC Unit Low Alert
- Serial Number

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

b. This option only appears when small amount of toner is left in the cartridge.

Menu overview

Network Menu (K220xND series only)

Network (see "Network setup" on page 107)

TCP/IP (IPv4)

DHCP

BOOTP

Static

TCP/IP (IPv6)

IPv6 Protocol

DHCPv6 Config

Ethernet

Ethernet Port

Ethernet Speed

Protocol Management

HTTP

WINS

SNMPv1/v2

UPnP(SSDP)

mDNS

SetIP

SLP

Network Configuration

Clear Settings

Menu overview

Scan Menu

Select  (scan) > **Scan To PC** on the control panel.

Scan Feature

(see "Scan feature" on page 91)

Scan to PC

File Format

Color Mode

Resolution

Original Size

Duplex



3. Media and Tray

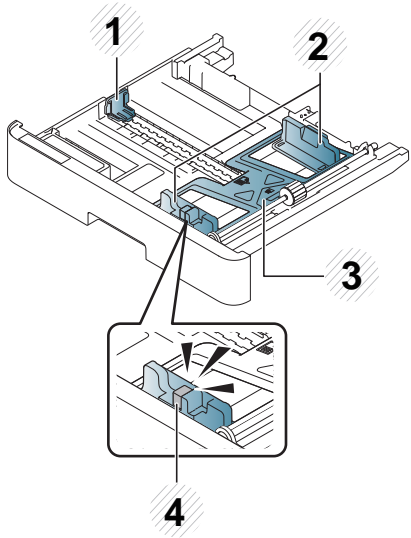
This chapter provides information on how to load print media into your machine.

- **Tray overview** 29
- **Loading paper in the tray** 30
- **Printing on special media** 34
- **Setting the paper size and type** 36
- **Loading the original** 37
- **Print media specifications** 41



Tray overview

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



- 1 Paper length guide
- 2 Paper width guide
- 3 Paper bottom plate
- 4 Tray extend lever

Loading paper in the tray

Preparing paper

- Use only print media that meets the specifications required by the machine.
- If you use print media that does not meet the specifications outlined in this user guide, the following problems may occur:
 - Low printing quality, paper jams, excessive wear on the machine
- The weight, material, surface condition, and moisture content of the print media may affect the performance and printing quality of the machine.
- Some print media may not produce the desired result even if it meets the specifications outlined in this user guide.

This may occur due to mishandling of the print media, unsuitable temperature or humidity, or other uncontrollable factors.
- Using print media that does not meet the specifications outlined in this user guide may result in machine malfunctions that require repairs.

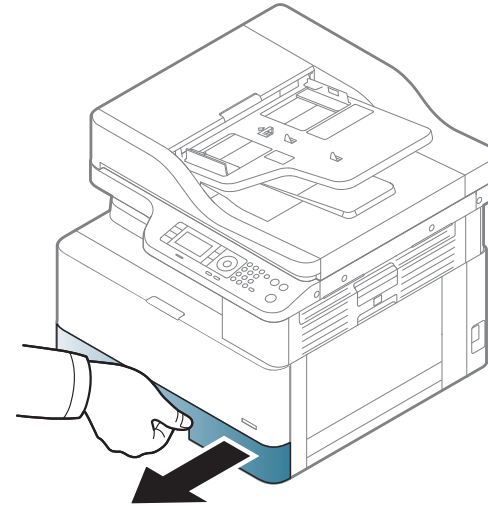
Such repairs are not covered by the warranty agreement.
- Do not use inkjet photo print media with this machine. Doing so may damage the machine.
- Do not use creased, torn, or damp print media.



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.

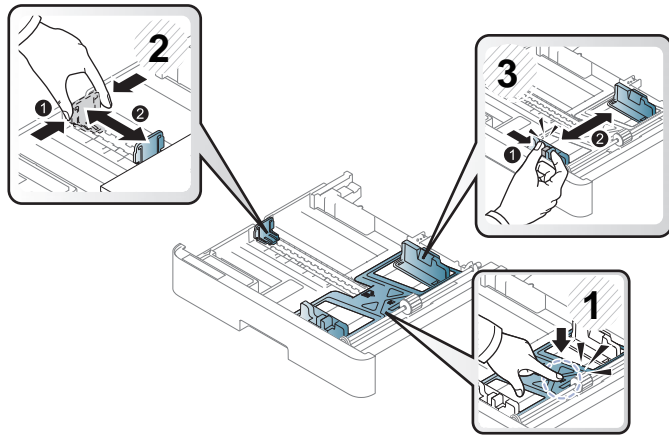
Tray 1 / optional tray

- 1 Pull out the paper tray.

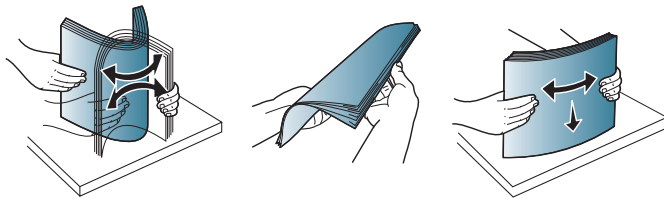


Loading paper in the tray

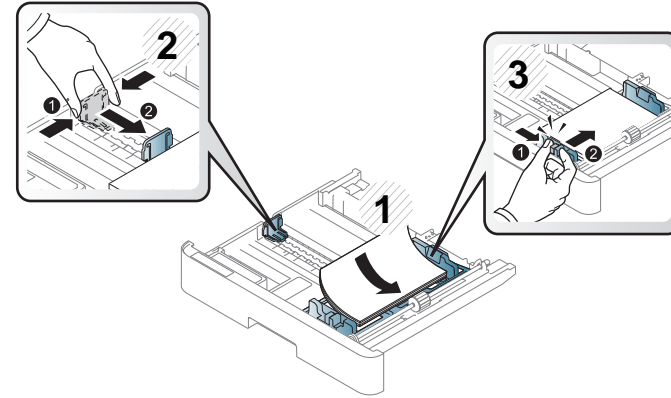
- 2** Squeeze and slide the paper width guide and paper length lever to locate them in the correct paper size slot marked at the bottom of the tray to adjust to the size (see "Tray overview" on page 29).



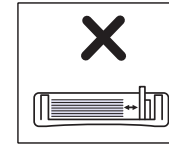
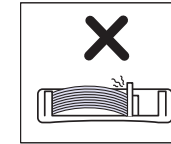
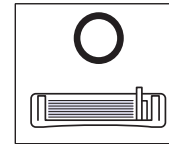
- 3** Flex or fan the edge of the paper stack to separate the pages before loading papers.



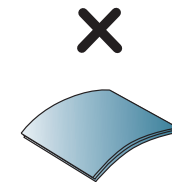
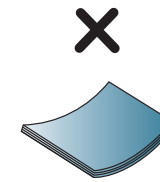
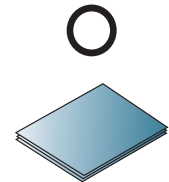
- 4** After inserting paper into the tray, squeeze and slide the paper width guides and paper length guide.



- Do not push the paper width guide too far causing the media to warp.
- If you do not adjust the paper width guide, it may cause paper jams.

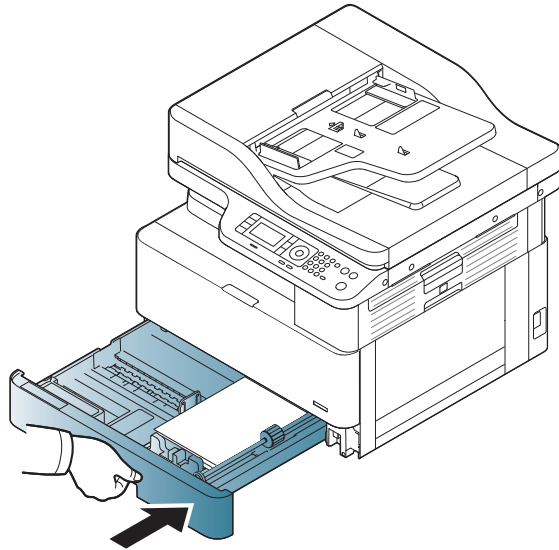


- Do not use a paper with a leading-edge curl, it may cause a paper jam or the paper can be wrinkled.



Loading paper in the tray

- 5 Insert the tray back into the machine.

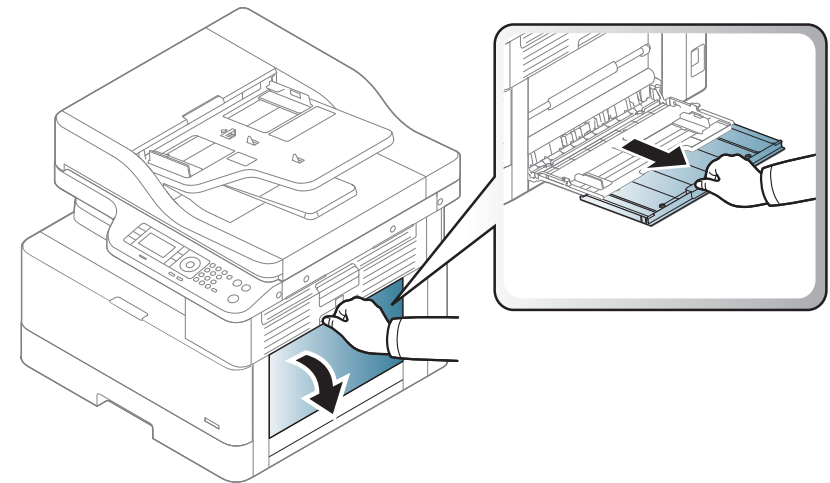


- 6 When you print a document, set the paper type and size for tray (see "Setting the paper size and type" on page 36).

Multi-purpose tray

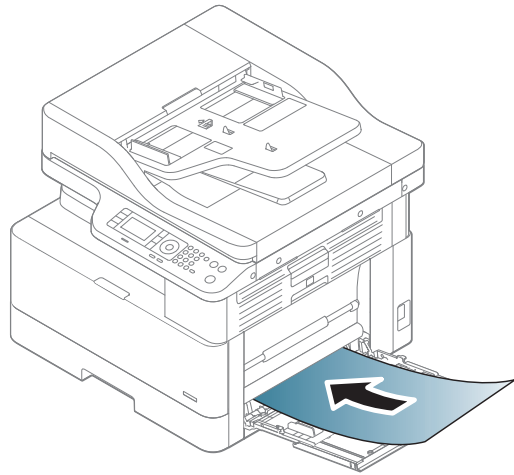
The multi-purpose tray can hold special sizes and types of print material, such as postcards, note cards, and envelopes (see "Print media specifications" on page 41).

- 1 Hold the handle of multi-purpose tray and pull it down to open and pull out the multi-purpose tray paper extension.

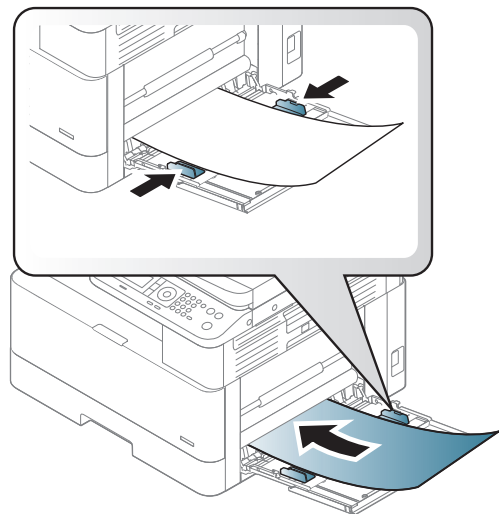


Loading paper in the tray

- 2 Load the paper.



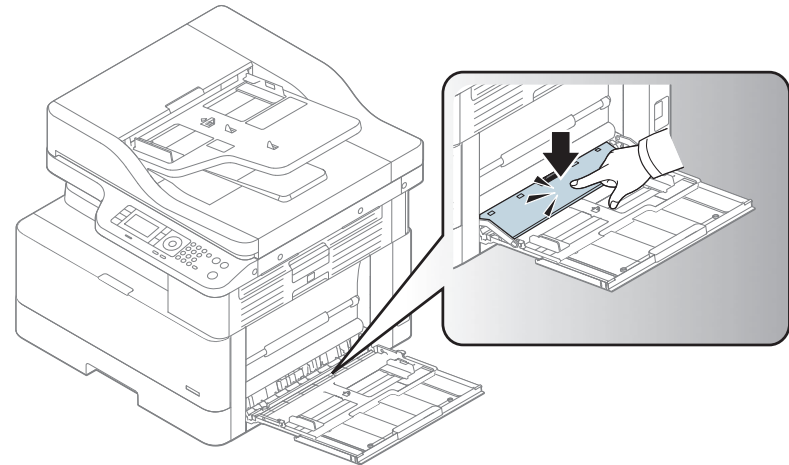
- 3 Squeeze the multi-purpose tray paper width guides and adjust them to the width of the paper. Do not force them too much, or the paper will bent resulting in a paper jam or skew.



- 4 When you print a document, set the paper type and size for the multi-purpose tray (see "Setting the paper size and type" on page 36).





If multi-purpose tray gets empty while printing, supply paper after pressing the Multi-purpose Lock Plate.



Printing on special media

The paper setting in the machine and driver should match to print without a paper mismatch error.

To change the paper setting set in the machine, from the **Samsung Easy Printer Manager** select  **(Switch to advanced mode) > Device Settings.**

Or if your machine supports a display screen, you can set it using the  **(Menu)** button on the control panel.

Then, set the paper type from the **Printing preferences** window > **Paper** tab > **Paper Type** (see "Opening printing preferences" on page 61).

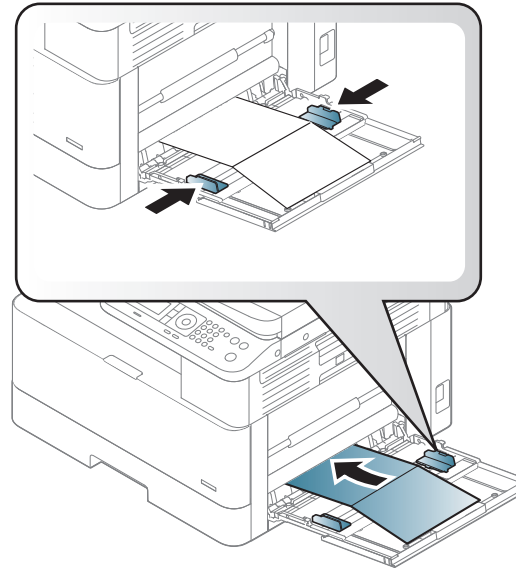
For example, if you want to print on labels, select **Labels** for **Paper Type**.



- When using special media, we recommend you feed one sheet at a time (see "Print media specifications" on page 41).
- 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 16).

To see paper weights for each sheet, refer to "Print media specifications" on page 41.

Card stock/ Custom-sized paper

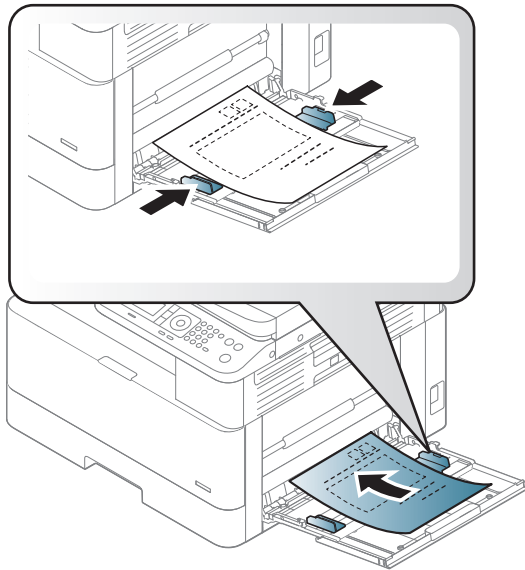


- In the software application, set the margins to at least 6.4 mm (0.25 inches) away from the edges of the material.

Printing on special media

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.

Setting the paper size and type

The paper setting in the machine and driver should match to print without a paper mismatch error.

To change the paper setting set in the machine, from the **Samsung Easy Printer Manager** select  **(Switch to advanced mode) > Device Settings.**

Or if your machine supports a display screen, you can set it using the  **(Menu)** button on the control panel.

Then, set the paper type from the **Printing preferences** window > **Paper** tab > **Paper Type** (see "Opening printing preferences" on page 61).





It may be necessary to press **OK** to navigate to lower-level menus for some models.



If you want to use special-sized paper such as billing paper, select the **Paper** tab > **Size** > **Edit...** and set **Custom Paper Size Settings** in the **Printing Preferences** (see "Opening printing preferences" on page 61).

After loading paper in the paper tray, set the paper size and type using the control panel buttons.

- 1 Select  **(Menu) > System Setup > Paper Setup > Paper Size** or **Paper Type** on the control panel.
- 2 Select the tray and the option you want.
- 3 Press **OK** to save the selection.
- 4 Press  **(Stop)** button to return to ready mode.

Loading the original

Preparing originals

- Do not load documents that are smaller than 140 x 140 mm (5.5 x 5.5 inches) or larger than 297 x 432 mm (11.7 x 17 inches).
- Do not load documents printed on the following types of paper to avoid paper jams, low printing quality, and machine malfunctions:
 - Carbon-paper or carbon-backed paper
 - Coated paper
 - Tracing paper or thin paper
 - Wrinkled or creased paper
 - Curled or rolled paper
 - Torn paper
- Remove all staples and paper clips from the document before loading it.
- Make sure that any glue, ink, or correction fluid on the document is completely dry before loading it.
- Do not load original documents that include different sizes or weights of paper.
- Do not load booklets, pamphlets, transparencies, or documents with other unusual characteristics.

Loading originals

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



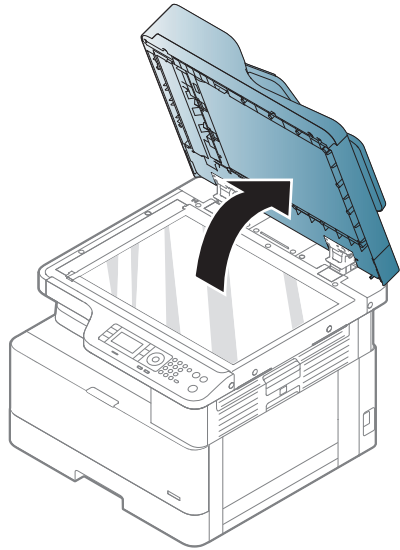
Illustrations on this user's guide may differ from your machine depending on its options or models. Check your machine type (see "Front view" on page 16).

On the scanner glass

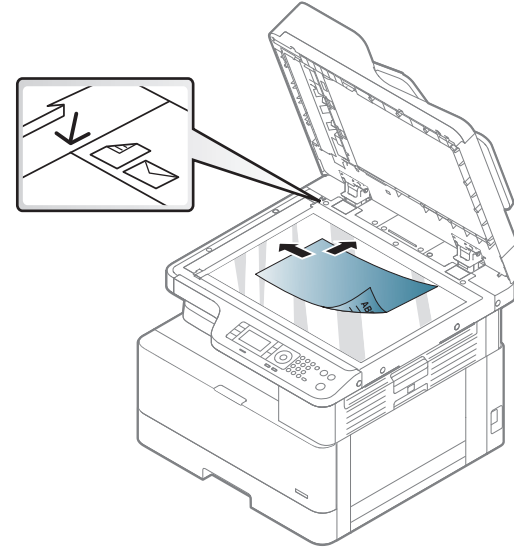
Using the scanner glass, you can copy or scan originals. You can get the best scan quality, especially for colored or gray-scaled images. Make sure that no originals are in the document feeder. If an original is detected in the document feeder, the machine gives it priority over the original on the scanner glass.

Loading the original

- 1 Lift and open the scanner lid.



- 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 scan unit" on page 129).
- 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.

Loading the original

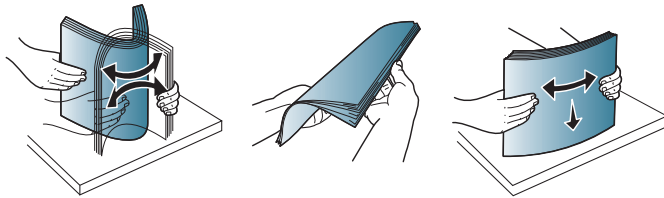


- Be careful not to break the scanner glass. You may get hurt.
- Do not put hands while closing the scanner lid. The scanner lid may fall on your hands and get hurt.
- Do not look into the light from inside of the scanner while copying or scanning. It is harmful to eyes.

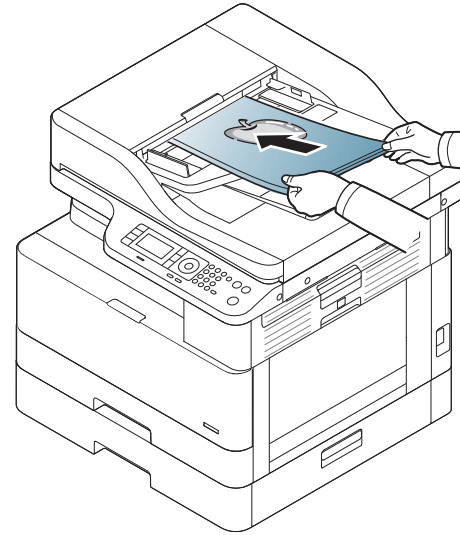
In the document feeder

Using the reverse automatic document feeder (RADF), you can load up to 100 sheets of paper (80 g/m², 21 lbs bond) for one job.

- 1 Flex or fan the edge of the paper stack to separate the pages before loading originals.

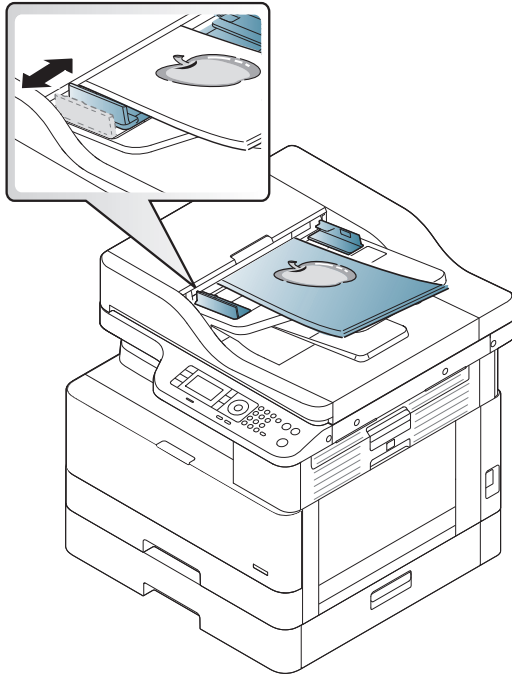


- 2 Load the original face up into the document feeder input tray. Make sure that the bottom of the original stack matches the paper size marked on the document input tray.



Loading the original

- 3 Adjust the document feeder width guides to the paper size.



Dust on the document feeder glass may cause black lines on the printout. Always keep the glass clean (see "Cleaning the scan unit" on page 129).

Print media specifications

Type	Size	Dimensions	Print media weight/Capacity ^a	
			Tray1 / Tray2	Multi-purpose tray
Plain paper	Letter	216 x 279 mm (8.5 x 11 inches)	71 to 85 g/m ² (19 to 22.5 lbs bond) • 250 sheets of 80 g/m ² (21 lbs bond)	71 to 85 g/m ² (19 to 22.5 lbs bond) • 100 sheets of 80 g/m ² (21 lbs bond)
	Ledger	279 x 432 mm (11 x 17 inches)		
	Legal	216 x 356 mm (8.5 x 14 inches)		
	US Folio	216 x 330 mm (8.5 x 13 inches)		
	Oficio	216 x 343 mm (8.5 x 13.5 inches)		
	B4	257 x 364 mm (10.1 x 14.3 inches)		
	JIS B5	182 x 257 mm (7.16 x 10.11 inches)		
	Executive	184 x 267 mm (7.25 x 10.5 inches)		
	8K	270 x 390 mm (10.75 x 15.5 inches)		
	16K	195 x 270 mm (7.76 x 10.75 inches)		
	A3	297 x 420 mm (11.7 x 16.5 inches)		
	A4	210 x 297 mm (8.26 x 11.69 inches)		
	A5	148 x 210 mm (5.82 x 8.26 inches)		
	Statement	140 x 216 mm (5.5 x 8.5 inches)	Not available in tray1/ tray2.	
PostCard	152 x 102 mm (6 x 4 inches)	Not available in tray1/ tray2.		
Thick paper	Refer to the Plain paper section	Refer to the Plain paper section	86 to 110 g/m ² (23 to 29 lbs bond)	86 to 105 g/m ² (23 to 28 lbs bond)
Heavy weight paper	Refer to the Plain paper section	Refer to the Plain paper section	Not available in tray1/ tray2.	111 to 163 g/m ² (30 to 43.5 lbs bond)
Thin paper	Refer to the Plain paper section	Refer to the Plain paper section	60 to 70 g/m ² (16 to 19 lbs bond)	60 to 70 g/m ² (16 to 19 lbs bond)

Print media specifications

Type	Size	Dimensions	Print media weight/Capacity ^a	
			Tray1 / Tray2	Multi-purpose tray
Cotton paper, Colored paper, Pre-Printed paper, LetterHead paper, Pre- Punched paper	Refer to the Plain paper section	Refer to the Plain paper section	75 to 90 g/m ² (20 to 24lbs bond)	75 to 90 g/m ² (20 to 24lbs bond)
Recycled paper	Refer to the Plain paper section	Refer to the Plain paper section	60 to 90 g/m ² (16 to 24lbs bond)	60 to 90 g/m ² (16 to 24lbs bond)
Bond paper	Refer to the Plain paper section	Refer to the Plain paper section	Not available in tray1/ tray2.	105 to 120 g/m ² (28 to 32lbs bond)
Archive paper	Refer to the Plain paper section	Refer to the Plain paper section	75 to 110 g/m ² (20 to 29lbs bond)	75 to 105 g/m ² (20 to 28lbs bond)
Thin Card stock	Refer to the Plain paper section	Refer to the Plain paper section	Not available in tray1/ tray2.	105 to 163 g/m ² (28 to 43 lbs bond)
Minimum size (custom)^{b, c}		<ul style="list-style-type: none"> Multi-purpose tray: 152.4 x 101.6 mm (6 x 4 inches) Tray 1/ Tray 2: 148 x 210 mm (5.85 x 8.27 inches) 	<ul style="list-style-type: none"> Multi-purpose tray: 60 to 163 g/m² (16 to 43.5 lbs bond) Tray 1/ Tray 2: 60 to 110 g/m² (16 to 29.3 lbs bond) 	
Maximum size (custom)		297 x 432 mm (11.69 x 17.01 inches)		

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

b. The paper types available in multi-purpose tray: Plain, Thick, Thicker, Thin, Cotton, Colored, Pre-printed, Recycled, Envelope, Transparency, Labels, Cardstock, Bond, Archive

c. The paper types available in tray 1: Plain, Thick, Thin, Recycled, Cardstock, Bond, Archive



4. 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. If your machine is attached to a network, skip the following steps below and go on to installing a network connected machine's driver (see "Using a Network-Connected Machine" on page 47).

- **Installation for Windows** **44**
- **Reinstallation for Windows** **46**



Only use a USB cable no longer than 3 meters (118 inches).

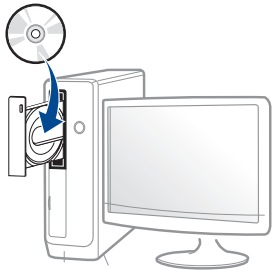
Installation for Windows

A locally connected machine is a machine directly attached to your computer using the cable. If your machine is attached to a network, skip the following steps below and go on to installing a network connected machine's driver (see "Installing software over the network" on page 52).



- 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).

- 1 Make sure that the machine is connected to your computer and powered on.
- 2 Insert the supplied software CD into your CD-ROM drive.



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-ROM 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-ROM 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 Review and accept the installation agreements in the installation window. Then, click **Next**.
- 4 Select **USB connection** on the **Printer Connection Type** screen. Then, click **Next**.
- 5 Follow the instructions in the installation window.



You can select the software applications in the **Select Software to Install** Window.

Installation for Windows

From the Windows 8 Start Screen



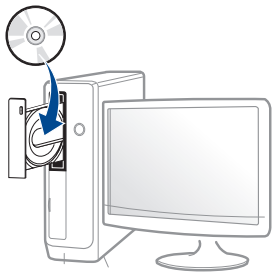
- You can download Samsung Printer Experience app from the **Windows Store**. You need have a Microsoft account to use the Windows **Store**.
 - 1 From **Charms**, select **Search**.
 - 2 Click **Store**.
 - 3 Search and click **Samsung Printer Experience**.
 - 4 Click **Install**.
- If you install the 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 Samsung website, www.samsung.com >find your product > Support or downloads.
- If you want to install Samsung'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**.

Reinstallation for Windows

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

- 1 Make sure that the machine is connected to your computer and powered on.
- 2 From the **Start** menu, select **Programs** or **All Programs** > **Samsung Printers** > **Uninstall Samsung Printer Software**.
 - 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**.
 - 5 Follow the instructions in the window.
- 3 Follow the instructions in the installation window.
- 4 Insert the software CD into your CD-ROM drive and install the driver again (see "Installation for Windows" on page 44).



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 Samsung Printer Software** tile in the **Start** screen.
- 3 Follow the instructions in the window.



- If you cannot find a Samsung Printer Software tile, uninstall from the desktop screen mode.
- If you want to uninstall Samsung'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.



5. 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** 48
- **IPv6 configuration** 49
- **Installing software over the network** 52



Supported optional devices and features may differ according to your model (see "Features by model" 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.
- Network model only (see "Software" on page 8).

SyncThru™ Web Service

The web server embedded on your network machine allows you to do the following tasks (see "Using SyncThru™ Web Service" on page 133).

- Check the supplies information and status.
- Customize machine settings.
- Configure the network parameters necessary for the machine to connect to various network environments.

SyncThru™ Web Admin Service

Web-based machine management solution for network administrators. SyncThru™ Web Admin Service provides you with an efficient way of managing network devices and lets you remotely monitor and troubleshoot network machines from any site with corporate internet access.

- Download this program from <http://solution.samsungprinter.com>.

SetIP wired network setup

This utility program allows you to select a network interface and manually configure the IP addresses for use with the TCP/IP protocol.

See "IPv4 configuration using SetIP (Windows)" on page 52.



- The machine that does not support the network port, it will not be able to use this feature (see "Rear view" on page 17).
- TCP/IPv6 is not supported by this program.

IPv6 configuration



IPv6 is supported properly only in Windows Vista or higher.



Some features and optional goods may not be available depending on model or country (see "Features by model" on page 7 or "Accessing the menus" on page 21).

The machine supports the following IPv6 addresses for network printing and managements.

- **Link-local Address:** Self-configured local IPv6 address (Address starts with FE80).
- **Stateless Address:** Automatically configured IPv6 address by a network router.
- **Stateful Address:** IPv6 address configured by a DHCPv6 server.
- **Manual Address:** Manually configured IPv6 address by a user.

In the IPv6 network environment, follow the next procedure to use the IPv6 address.

From the control panel

Network model only (see "Software" on page 8).

Activating IPv6



It may be necessary to press **OK** to navigate to lower-level menus for some models.

- 1 Select (**Menu**) > **Network** > **TCP/IP (IPv6)** > **IPv6 Protocol** on the control panel.
- 2 Select **On** and press **OK**.
- 3 Turn the machine off and turn it on again.



When you install the printer driver, do not configure both IPv4 and IPv6. We recommend to configure either IPv4 or IPv6.

IPv6 configuration

DHCPv6 address configuration

If you have a DHCPv6 server on your network, you can set one of the following options for default dynamic host configuration.



It may be necessary to press **OK** to navigate to lower-level menus for some models.

- 1 Select (**Menu**) > **Network** > **TCP/IP (IPv6)** > **DHCPv6 Config** on the control panel.
- 2 Press **OK** to select the required value you want.
 - **Router:** Use DHCPv6 only when requested by a router.
 - **Always Use:** Always use DHCPv6 regardless of router request.
 - **Never Use:** Never use DHCPv6 regardless of router request.

From the SyncThru™ Web Service

Network model only (see "Software" on page 8).

Activating IPv6

- 1 Access a web browser, such as Internet Explorer, from Windows. Enter the machine IP address (http://xxx.xxx.xxx.xxx) in the address field and press the Enter key or click **Go**.
- 2 If it's your first time logging into **SyncThru™ 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: sec00000**
- 3 When the **SyncThru™ Web Service** window opens, move the mouse cursor over the **Settings** of the top menu bar and then click **Network Settings**.
- 4 Click **TCP/IPv6** on the left pane of the website.
- 5 Check the **IPv6 Protocol** check box to activate IPv6.
- 6 Click the **Apply** button.

IPv6 configuration

- 7 Turn the machine off and turn it on again.



- You can also set the DHCPv6.
- To manually set the IPv6 address:
Check the **Manual Address** check box. Then, the **Address/Prefix** text box is activated. Enter the rest of the address (e.g.,:3FFE:10:88:194::**AAAA**. "A" is the hexadecimal 0 through 9, A through F).

- 3 Enter the IPv6 addresses (e.g.,: http://[FE80::215:99FF:FE66:7701]).



Address must be enclosed in '[']' brackets.

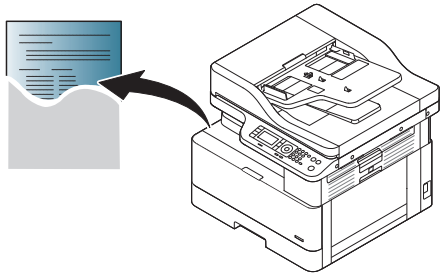
IPv6 address configuration

- 1 Start a web browser, such as Internet Explorer, that supports IPv6 addressing as a URL.
- 2 Select one of the IPv6 addresses (**Link-local Address**, **Stateless Address**, **Stateful Address**, **Manual Address**) from **Network Configuration Report** (see "Printing a network configuration report" on page 52).
 - **Link-local Address:** Self-configured local IPv6 address (Address starts with FE80).
 - **Stateless Address:** Automatically configured IPv6 address by a network router.
 - **Stateful Address:** IPv6 address configured by a DHCPv6 server.
 - **Manual Address:** Manually configured IPv6 address by a user.


Installing software over the network

Printing a network configuration report

You can print **Network Configuration Report** from the machine's control panel that will show the current machine's network settings. This will help you to set up a network.



It may be necessary to press **OK** to navigate to lower-level menus for some models.

Press the  (**Menu**) button on the control panel and select **Network > Network Configuration**.

Using this **Network Configuration Report**, you can find your machine's MAC address and IP address.

For example:

- MAC Address: 00:15:99:41:A2:78
- IP Address: 169.254.192.192

Setting IP address



- The machine that does not support the network interface, it will not be able to use this feature (see "Rear view" on page 17).
- TCP/IPv6 is not supported by this program.

First, you have to set up an IP address for network printing and managements. In most cases a new IP address will be automatically assigned by a DHCP (Dynamic Host Configuration Protocol) server located on the network.

IPv4 configuration using SetIP (Windows)


Before using the SetIP program, disable the computer firewall from **Control Panel > Security Center > Windows Firewall**.



The following instructions may differ for your model.

- 1 Download the software from the Samsung website then unpack and install it: (<http://www.samsung.com> > find your product > Support or Downloads).
- 2 Follow the instructions in the installation window.

Installing software over the network

- 3 Connect your machine to the network with a network cable.
- 4 Turn on the machine.
- 5 From the Windows **Start** menu, select **All Programs > Samsung Printers > SetIP > SetIP**.
- 6 Click the  icon in the SetIP window to open the TCP/IP configuration window.
- 7 Enter the machine's new information into the configuration window. In a corporate intranet, you may need to have this information assigned by a network manager before proceeding.



Find the machine's MAC address from the **Network Configuration Report** (see "Printing a network configuration report" on page 52) and enter it without the colons. For example, 00:15:99:29:51:A8 becomes 0015992951A8.

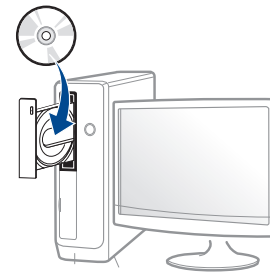
- 8 Click **Apply**, and then click **OK**. The machine will automatically print the **Network Configuration Report**. Confirm that all the settings are correct.

Windows



- Some features and optional goods may not be available depending on model or country (see "Features by model" on page 7).
- The machine that does not support the network interface, it will not be able to use this feature (see "Rear view" on page 17).
- You can install the printer driver and software when you insert the software CD into your CD-ROM drive. For windows, select the printer driver and software in the **Select Software to Install** window.

- 1 Make sure that the machine is connected to the network and powered on. Also, your machine's IP address should have been set (see "Setting IP address" on page 52).
- 2 Insert the supplied software CD into your CD-ROM drive.



Installing software over the network

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-ROM 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-ROM 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** Insert the supplied software CD into your CD-ROM drive.
- 4** Review and accept the installation agreements in the installation window. Then, click **Next**.
- 5** Select **Network connection** on the **Printer Connection Type** screen. Then, click **Next**.
- 6** Follow the instructions in the installation window.

From the Windows 8 Start Screen



- **Samsung Printer Experience** app can only be used in the **Start** screen when V4 driver is installed. The V4 driver is automatically downloaded from the Windows Update if your computer is connected to the Internet. If not, you can manually download the V4 driver from Samsung website, www.samsung.com > find your product > Support or downloads.
- You can download **Samsung Printer Experience** app from the **Windows Store**. You need have a Microsoft account to use the Windows Store.
 - a** From **Charms**, select **Search**.
 - b** Click **Store**.
 - c** Search and click **Samsung Printer Experience**.
 - d** Click **Install**.
- 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 Samsung website, www.samsung.com > find your product > Support or downloads.
- If you want to install Samsung's printer management tools, you need to install them using the supplied software CD.

- 1** Make sure that the machine is connected to the network and powered on. Also, your machine's IP address should have been set (see "Setting IP address" on page 52).
- 2** From **Charms**, select **Settings** > **Change PC settings** > **Devices**.

Installing software over the network

3 Click **Add a device**.

Discovered machines will be shown on the screen.

4 Click the model name or host name you wish to use.



You can print a Network Configuration Report from the machine's control panel that will show the current machine's host name (see "Printing a network configuration report" on page 52).

5 The driver is automatically installed from the **Windows Update**.

Silent installation Mode

Silent installation mode is an installation method that does not require any user intervention. Once you start the installation, the machine driver and software are automatically installed on your computer. You can start the silent installation by typing **/s** or **/S** in the command window.

Command-line Parameters


Following table shows commands that can be used in the command window.




Following command-line are effective and operated when command is used with **/s** or **/S**. But **/h**, **/H** or **/?** are exceptional commands that can be operated solely.

Command- line	Definition	Description
<code>/s</code> or <code>/S</code>	Starts silent installation.	Installs machine drivers without prompting any UIs or user intervention.

Installing software over the network

Command- line	Definition	Description
<code>/p"<port name>" or/ P"<port name>"</code>	Specifies printer port.  Network Port will be created by use of Standard TCP/IP Port monitor. For local port, this port must exist on system before being specified by command.	Printer port name can be specified as IP address, hostname, USB local port name, IEEE1284 port name or network path. For example: <ul style="list-style-type: none"> <code>/p"xxx.xxx.xxx.xxx"</code> in where, "xxx.xxx.xxx.xxx" means IP address for network printer. / <code>p"USB001"</code>, /<code>P"LPT1:"</code>, / <code>p"hostname"</code>, / <code>p"\\computer_name\shared_printer"</code> or <code>"\\xxx.xxx.xxx.xxx\shared_printer"</code> in where, <code>"\\computer_name\shared_printer"</code> or <code>"\\xxx.xxx.xxx.xxx\shared_printer"</code> means the network path to the printer by entering two slashes, the computer name or local IP address of the PC sharing the printer, and then the share name of the printer.

Command- line	Definition	Description
<code>/a"<dest_path>" or/ A"<dest_path>"</code>	Specifies destination path for installation.  The destination path should be a fully qualified path.	Since machine drivers should be installed on the OS specific location, this command applies to only application software.
<code>/n"<Printer name>" or/N"<Printer name>"</code>	Specifies printer name. Printer instance shall be created as specified printer name.	With this parameter, you can add printer instances as you wish.
<code>/nd or/ND</code>	Commands not to set the installed driver as a default machine driver.	It indicates installed machine driver will not be the default machine driver on your system if there are one or more printer drivers installed. If there is no installed machine driver on your system, then this option won't be applied because Windows OS will set installed printer driver as a default machine driver.

Installing software over the network

Command- line	Definition	Description
/x or/X	Uses existing machine driver files to create printer instance if it is already installed.	This command provides a way to install a printer instance that uses installed printer driver files without installing an additional driver.
/up"<printer name>" or/UP"<printer name>"	Removes only specified printer instance and not the driver files.	This command provides a way to remove only specified printer instance from your system without effecting other printer drivers. It will not remove printer driver files from your system.
/d or/D	Uninstalls all device drivers and applications from your system.	This command will remove all installed device drivers and application software from your system.
/v"<share name>" or/V"<share name>"	Shares installed machine and add other available platform drivers for Point & Print.	It will install all supported Windows OS platform's machine drivers to system and share it with specified <share name> for point and print.

Command- line	Definition	Description
/o or /O	Opens Printers and Faxes folder after installation.	This command will open Printers and Faxes folder after the silent installation.
/h, /H or /?	Shows Command-line Usage.	



6. Printing

This chapter explains common printing tasks.

- **Print setup on the control panel** 59
- **Windows printing** 60



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



Print setup on the control panel



Some menus may not appear in the display depending on options or models. If so, it is not applicable to your machine (see "Print Setup Menu (K220xND series only)" on page 24).

To change the menu options:

- Press  (**Menu**) > **Print Setup** on the control panel.

Item	Description
Orientation	Selects the direction in which information is printed on a page. <ul style="list-style-type: none">Portrait Landscape 
Duplex	You can set the machine to print on both sides of paper.
Copies	You can enter the number of print using the number keypad.

Item	Description
Resolution	Sets the resolution option. The higher the setting, the sharper printed characters and graphics.
Clear Text	Prints text darker than on a normal document.
Auto CR	Allows you to append the required carriage return to each line feed, which is useful for DOS users.
Skip Blank Pages	The printer detects the printing data from computer whether a page is empty or not. You can set to print or skip the blank page.
Emulation	Sets the detailed settings for the emulation type.

Windows printing

Printing

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 **Select 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 61).

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

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**) button on the control panel.

Windows printing

Opening printing preferences

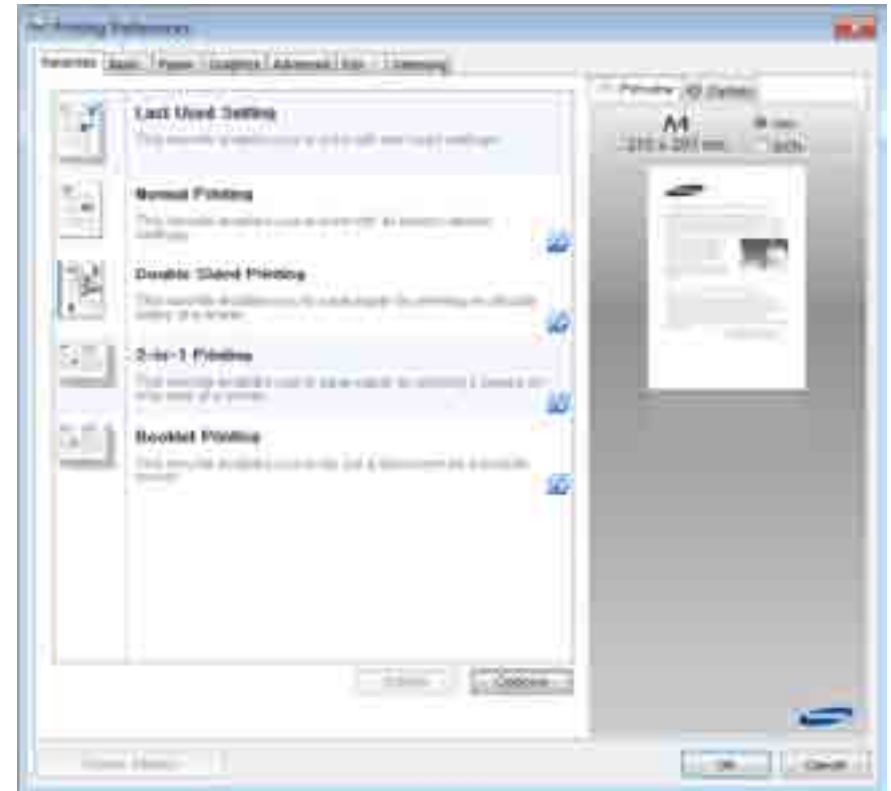


- The **Printing Preferences** window that appears in this user's guide may differ depending on the machine in use.
- When you select an option in **Printing Preferences**, you may see a warning mark  or . An  mark means you can select that certain option but it is not recommended, and an  mark means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



The screenshot may differ depending on model.



- You can apply **Eco** features to save paper and toner before printing.
- You can check the machine's current status pressing the **Printer Status** button.

Windows printing

Using a favorite setting

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

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

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



- 3 Click **Save**.
- 4 Enter name and description, and then select the desired icon.
- 5 Click **OK**. When you save **Favorites**, all current driver settings are saved.



To use a saved setting, select it in the **Favorites** tab. The machine is now set to print according to the settings you have selected. To delete saved settings, select it in the **Favorites** tab and click **Delete**.

Using help

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

Changing the default print settings

- 1 Click the Windows **Start** menu.
 - For Windows 8, from the **Charms**, select **Search > Settings**.
- 2 For Windows XP/Server 2003, select **Printer and Faxes**.
 - For Windows Server 2008/Vista, select **Control Panel > Hardware and Sound > Printers**.
 - For Windows 7/8, select **Control Panel > Devices and Printers**.
 - For Windows Server 2008 R2, select **Control Panel > Hardware > Devices and Printers**.

Windows printing

3 Right-click on your machine.

4 For Windows XP/Server 2003/Server 2008/Vista, select **Printing Preferences**.

For Windows 7/8 or Windows Server 2008 R2, from context menus, 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.

- For Windows 8, from the **Charms**, select **Search > Settings**.

2 For Windows XP/Server 2003, select **Printer and Faxes**.

- For Windows Server 2008/Vista, select **Control Panel > Hardware and Sound > Printers**.
- For Windows 7/8, select **Control Panel > Devices and Printers**.
- For Windows Server 2008 R2, select **Control Panel > Hardware > Devices and Printers**.

3 Select your machine.

4 Right-click your machine and select **Set as Default Printer**.



For Windows 7 or Windows Server 2008 R2, if **Set as default printer** has a ►, you can select other printer drivers connected to the selected printer.

Windows printing

Printing from Windows 8

This section explains common printing tasks from the **Start** screen.

Basic printing

- 1 Open the document to print.
- 2 From the **Charms**, select **Devices**.
- 3 Select your printer from the list.
- 4 Select the printer settings, such as the number of copies and orientation.



- 5 Click the **Print** button to start the print job.



Windows printing

Canceling a print job

If the printing 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**) button on the control panel.

Opening more settings



The screen may appear somewhat different depending on the model or options.

You can set up more printing parameters.

- 1 Open the document you want to print.
- 2 From the **Charms**, select **Devices**.
- 3 Select your printer from the list.
- 4 Click **More settings**.

Basic tab



Basic

This option allows you to choose the basic printing settings such as copies, orientation, and document type.

Eco settings

This option allows you to choose multiple pages per side to save media.

Windows printing

Advanced tab



Paper settings

This option allows you to set the basic paper handling specifications.

Layout settings

This option allows you to set the various ways to layout your documents.

Security tab



Some features may not be available depending on the model or options. If this tab is not shown or disabled, it means that these features are not supported.



Job Accounting

This option allows you to print with the given permission.


Confidential Printing

This option is used for printing confidential documents. You need to enter a password to print using it.

Windows printing

Using the sharing feature

Samsung Printer Experience allows you to print from other applications installed on the computer using the sharing feature.

 This feature is only available for printing jpeg, bmp, tiff, gif, and png file formats.

- 1 Select the content you want to print from other application.
- 2 From the **Charms**, select **Share > Samsung Printer Experience** .
- 3 Select the printer settings, such as the number of copies and orientation.
- 4 Click the **Print** button to start the print job.


Windows printing


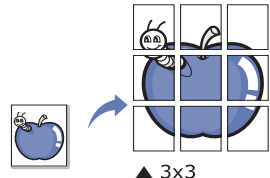
Printer features of the printer driver

You can use advanced printing features when using your machine.

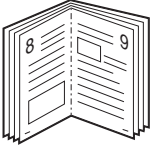


To take advantage of the printer features provided by your printer driver, click **Properties** or **Preferences** in the application's **Print** window to change the print settings. The machine name that appears in the printer properties window may differ depending on the machine in use.




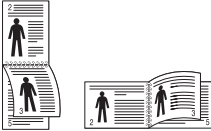
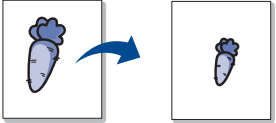

- Some menus may not appear on the display depending on options or models. If so, it is not applicable to your machine.
- Select the **Help** menu or click the  button from the window or press **F1** on your keyboard and click on any option you want to know about (see "Using help" on page 62).

Item	Description
Multiple Pages per Side 	Selects the number of pages to print on a single sheet of paper.
Poster Printing  ▲ 3x3	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.


Windows printing

Item	Description
<p>Booklet Printing^a</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">• If you want to make a booklet, you need to print on Letter, Legal, A4, US Folio, or Oficio sized print media.• The Booklet Printing option is not available for all paper sizes. Select the available paper Size option under the Paper tab to see what paper sizes are available.• If you select an unavailable paper size, this option can be automatically canceled. Select only available paper (paper without  or  mark).
<ul style="list-style-type: none">• Double-sided Printing• Double-sided Printing (Manual)^a	<p>Print on both sides of a sheet of paper (duplex).</p> <ul style="list-style-type: none">• 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.• Skip Blank Pages feature does not work when you select the Double-sided Printing (Manual) option.

Windows printing

Item	Description
<ul style="list-style-type: none">• Double-sided Printing• Double-sided Printing (Manual)^a	<ul style="list-style-type: none">• Printer Default: If you select this option, this feature is determined by the settings you have selected on the control panel of the machine.• None: Disables this feature.• Long Edge: This option is the conventional layout used in bookbinding. • Short Edge: This option is the conventional layout used in calendars. • Reverse Double-Sided Printing: Check this option to reverse the print order when duplex printing. This option is not available when you use Double-sided Printing (Manual).
Paper Options 	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.
Watermark 	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 "DRAFT" or "CONFIDENTIAL" printed diagonally across the first page or all pages of a document.

Windows printing

Item	Description
Watermark (Creating a watermark)	<p>a To change the print settings from your software application, access Printing Preferences.</p> <p>b Click the Advanced tab, select Edit from the Watermark drop-down list. The Edit Watermarks window appears.</p> <p>c Enter a text message in the Watermark Message box and Click OK. You can enter up to 256 characters. The message displays in the preview window.</p>
Watermark (Editing a watermark)	<p>a To change the print settings from your software application, access Printing Preferences.</p> <p>b Click the Advanced tab, select Edit from the Watermark drop-down list. The Edit Watermarks window appears.</p> <p>c Select the watermark you want to edit from the Current Watermarks list and change the watermark message and options.</p> <p>d Click Update to save the changes.</p> <p>e Click OK or Print until you exit the Print window.</p>
Watermark (Deleting a watermark)	<p>a To change the print settings from your software application, access Printing Preferences.</p> <p>b Click the Advanced tab, select Edit from the Watermark drop-down list. The Edit Watermarks window appears.</p> <p>c Select the watermark you want to delete from the Current Watermarks list and click Delete.</p> <p>d Click OK or Print until you exit the Print window.</p>
Overlay^a	<p>This option is available only when you use the PCL/SPL printer driver (see "Software" on page 8).</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 style="border: 1px solid #ccc; padding: 10px; margin-top: 10px;"> <ul style="list-style-type: none">  • The overlay document size must be the same as the document you print with the overlay. Do not create an overlay with a watermark. • The resolution of the overlay document must be the same as that of the document you will print with the overlay. </div>



Windows printing

Item	Description
Overlay^a (Creating a new page overlay)	<p>a To save the document as an overlay, access Printing Preferences.</p> <p>b Click the Advanced tab, and select Edit from the Text drop-down list. Edit Overlay window appears.</p> <p>c In the Edit Overlay window, click Create.</p> <p>d In the Save As window, type a name up to eight characters in the File name box. Select the destination path, if necessary (The default is C:\Formover).</p> <p>e Click Save. The name appears on the Overlay List.</p> <p>f Click OK or Print until you exit the Print window. The file is not printed. Instead, it is stored on your computer hard disk drive.</p>
Overlay^a (Using a page overlay)	<p>a Click the Advanced tab.</p> <p>b Select the desired overlay from the Text drop-down list.</p> <p>c If the overlay file you want does not appear in the Text drop-down list, select Edit... from the list and click Load. 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 Open window. After you select the file, click Open. The file appears in the Overlay List box and is available for printing. Select the overlay from the Overlay List box.</p> <p>d If necessary, check Confirm Page Overlay When Printing 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.</p> <p>e Click OK or Print until you exit the Print window.</p>
Overlay^a (Deleting a page overlay)	<p>a In the Printing Preferences window, click the Advanced tab.</p> <p>b Select Edit in the Text drop down list.</p> <p>c Select the overlay you want to delete from the Overlay List box.</p> <p>d Click Delete.</p> <p>e When a confirming message window appears, click Yes.</p> <p>f Click OK or Print until you exit the Print window. You can delete page overlays that you no longer use.</p>

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

Windows printing

Printing with the XPS printer driver

Used to print XPS file format. For models that provide XPS driver from the Samsung website, <http://www.samsung.com> > find your product > Support or downloads. See "Features by model" on page 7.



The XPS printer driver can be installed only on Windows Vista OS or higher.

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.

Windows printing

Using Samsung Printer Status

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



- The Samsung 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 179).
- Available for Windows OS users only (see "Software" on page 8).

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

You can also launch Samsung 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	Toner Level	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.
2	Option	You can set printing job alert related settings.

Windows printing

3	Order Supplies	You can order replacement toner cartridge(s) from online.
4	User's Guide	You can view the online User's Guide.  This button opens the Troubleshooting Guide when an error occurs. You can directly open the troubleshooting section in the user's guide.
5	Close	Close the window.

Using Samsung Printer Experience

Samsung Printer Experience is a Samsung application that combines Samsung machine settings and machine management into one location. You can set device settings, order supplies, open troubleshooting guides, visit Samsung's website, and check connected machine information. This application will be automatically downloaded from the Windows **Store** if the machine is connected to a computer with an Internet connection.

To open the application,

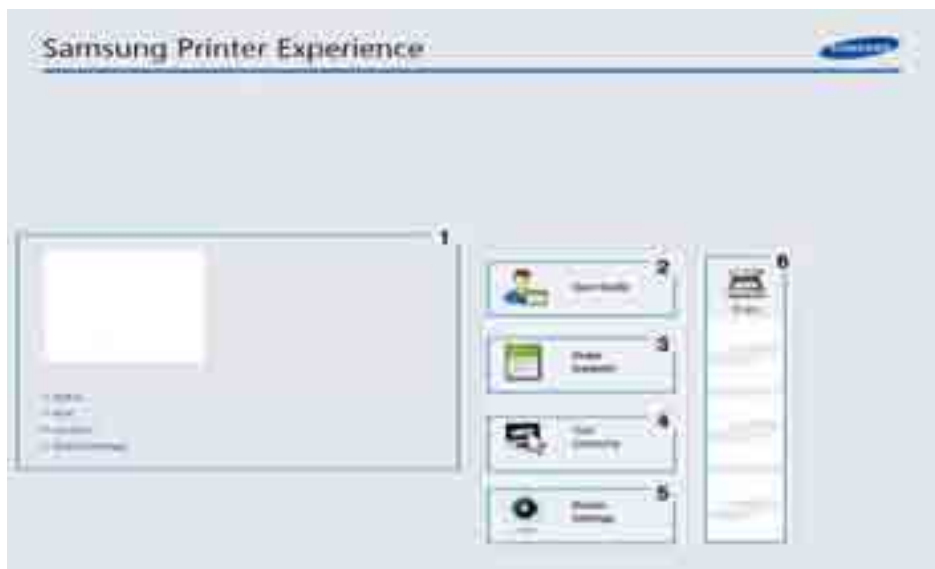
From the **Start** screen, select the **Samsung Printer Experience** () tile.

The **Samsung Printer Experience** interface comprises various useful features as described in the following table:


Windows printing



The screenshot may differ depending on the model you are using.



1	Printer Information	This area gives you general information about your machine. You can check information, such as the machine's status, location, IP address, and remaining toner level.
---	----------------------------	---

2	User Guide	You can view the online User's Guide. You need to be connected to the Internet to use this feature.  This button opens the Troubleshooting Guide when an error occurs. You can directly open the troubleshooting section in the user's guide.
3	Order Supplies	Click on this button to order replacement toner cartridges online. You need to be connected to the Internet to use this feature.
4	Visit Samsung	Links to Samsung printer website. You need to be connected to the Internet to use this feature.
5	Printer Settings	You can configure various machine settings such as machine setup, paper, layout, emulation, networking, and print information through SyncThru™ Web Service . Your machine needs to be connected to a network. This button will be disabled if your machine is connected via USB cable.
6	Device List & Latest Scanned Image	The scan list displays devices that supports Samsung Printer Experience . Under the device, you can see the latest scanned images. Your machine needs to be connected to a network to scan from here. This section is for the users with multi-functional printers.

Windows printing

Adding/Deleting printers

If you do not have any printer added to the **Samsung Printer Experience**, or if you want to add/delete a printer, follow the instructions below.



You can only add/delete network connected printers.

Adding a printer

- 1 From the **Charms**, select **Settings**.
Or, right-click the **Samsung Printer Experience** page and select **Settings**.
- 2 Select **Add Printer**.
- 3 Select the printer you want to add.
You can see the added printer.



If you see  mark, you can also click  mark to add printers.

Deleting a printer

- 1 From the **Charms**, select **Settings**.
Or, right-click the **Samsung Printer Experience** page and select **Settings**.
- 2 Select **Remove Printer**.
- 3 Select the printer you want to delete.
- 4 Click **Yes**.
You can see that the selected printer is removed from the screen.

Windows printing

Printing with Samsung AnyWeb Print



- Available for Windows OS users only.
- This feature may not be available depending on model or optional goods (see "Software" on page 8).

This tool helps you screen-capture, preview, scrap, and print Windows Internet Explorer pages more easily than when you use an ordinary program.

Download the software from the Samsung website then unpack and install it: (<http://www.samsung.com> > find your product > Support or Downloads).

Printing with Easy Capture Manager



- Available for Windows OS users only.
- This feature may not be available depending on model or optional goods (see "Software" on page 8).

Capture your screen and launch Easy Capture Manager by simply pressing the Print Screen key on the keyboard. Now you can easily print your captured screen as captured or edited.

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.


The default setting of Eco mode is duplex printing (long edge), multiple pages per side (2-up), skip blank pages, and toner save. Some features may not be available depending on model.



- Double-sided printing (long edge) feature is only available for duplex models (see "Variety feature" on page 7).
- Depending on the printer driver you use, skip blank pages may not work properly. If skip blank pages feature does not work properly, set the feature from the Easy Eco Driver.



You can set the eco value from **Device Settings** in Samsung Easy Printer Manager program.

- For Windows users, you set from **Samsung Easy Printer Manager** >  **(Switch to advanced mode)** > **Device Settings**, see "Device Settings" on page 114.

Windows printing

Setting on the control panel



It may be necessary to press **OK** to navigate to lower-level menus for some models.

- 1 Select (**Menu**) > **System Setup** > **Machine Setup** > **Eco Settings** on the control panel.
- 2 Select the option you want and press **OK**.
 - **Default Mode:** Select this to turn on or off the Eco mode.
 - **Off:** Set the Eco mode off.
 - **On:** Set the Eco mode on.




For network model, If you set the Eco mode on with a password from the SyncThru™ Web Service (**Settings** tab > **Machine Settings** > **System** > **Eco Settings**) or Samsung Easy Printer Manager (**Device Settings** > **Eco**), the **On force** message appears. You have to enter the password to change the Eco mode status.

- **Change Template:** Follow the settings from SyncThru™ Web Service or Samsung Easy Printer Manager. Before you select this item, you must set the eco function in SyncThru™ Web Service (**Settings** tab > **Machine Settings** > **System** > **Eco Settings**) or Samsung Easy Printer Manager (**Device Settings** > **Eco**).
 - **Select Template**
 - **Default Eco:** The machine is set to **Default Eco** mode.
 - **Custom Eco:** Change any necessary values.
- 3 Press **OK** to save the selection.

Setting on the driver



To take advantage of the advanced printing features, click **Properties** or **Preferences** from the **Print** window(see "Opening printing preferences" on page 61).

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.

Windows printing

- **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.
- 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.



Password button: You can set from SyncThru™ Web Service (**Settings** tab > **Machine Settings** > **System** > **Eco Settings**) or Samsung Easy Printer Manager (**Device Settings** > **Eco**), the password button is activated. To change the print settings, click on this button, enter the password or need to contact the administrator.

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 CO2, energy, and paper from **IEA**, the index of Ministry of Internal Affairs and Communication of Japan and 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.



7. Copying

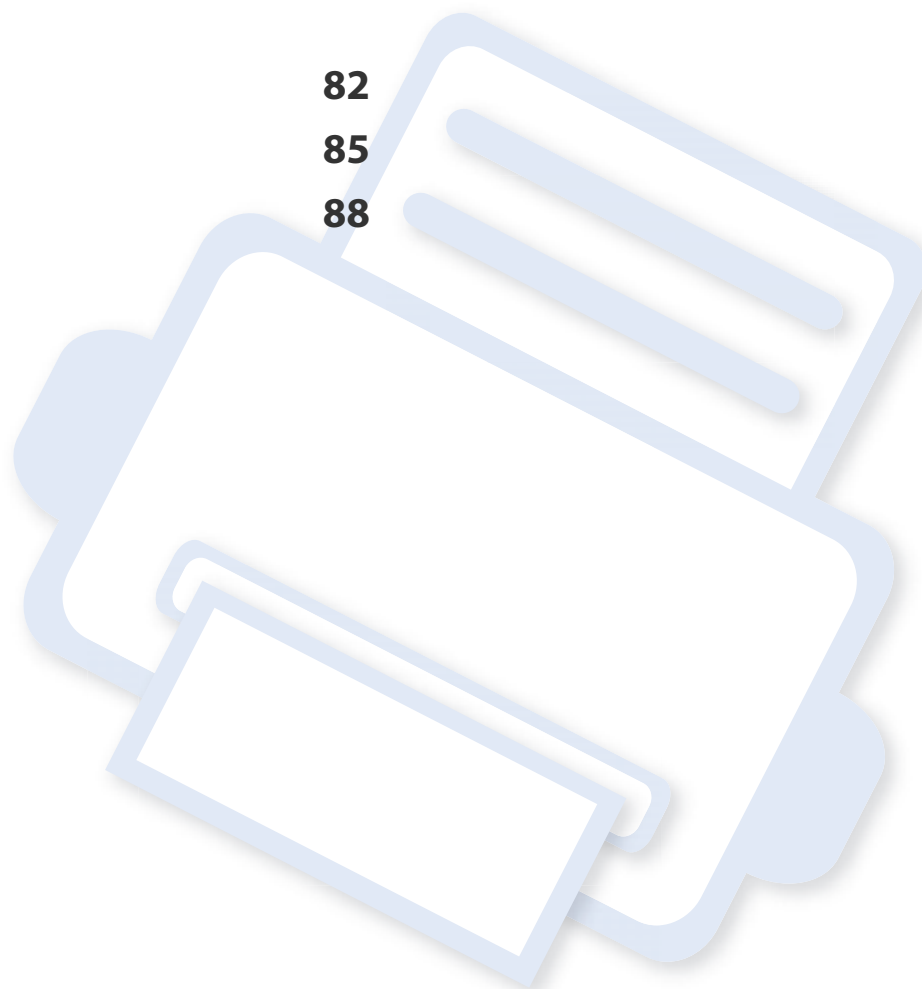
This chapter explains common copying tasks.

- **Copy features on the control panel**
- **Basic copying**
- **ID card copying**

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Copy features on the control panel

Copy feature



Some menus may not appear in the display depending on options or models. If so, it is not applicable to your machine (see "Copy Feature Menu" on page 22).


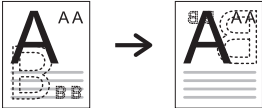

To change the menu options:

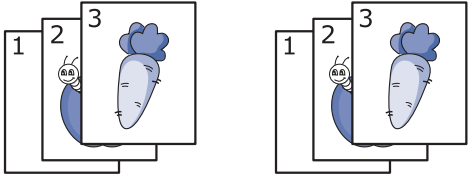
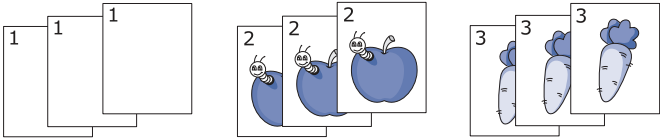
- Press (copy) > (Menu) > **Copy Feature** on the control panel.
- Or (Menu) > **Copy Feature** on the control panel.

Item	Description
Reduce/Enlarge	<p>Reduces or enlarges the size of a copied image (see "Reduced or enlarged copy" on page 86).</p> <p> If the machine is set to Eco mode, reduce and enlarge features are not available.</p>

Item	Description
Duplex	<p>You can set the machine to print copies on both sides of paper.</p> <ul style="list-style-type: none"> 1 ->1 Sided: Scans one side of an original and prints it on one side of the paper. 1->2 Sided, Book 1->2 Sided, Calendar 2->1 Sided, Book 2->1 Sided, Calendar 2->2 Sided, Book ->Book

Copy features on the control panel

Item	Description
Duplex	<ul style="list-style-type: none"> • 2->2 Sided, Calendar->Calendar 
	<ul style="list-style-type: none"> • 2->2 Sided, Book->Calendar 
	<ul style="list-style-type: none"> • 2->2 Sided, Calendar->Book 
	<p>Adjusts the brightness level to make a copy that is easier to read, when the original contains faint markings and dark images (see "Darkness" on page 85)</p>
Original Type	Improves the copy quality by selecting the document type for the current copy job (see "Original Type" on page 86)
Image Rotation	Allows you to rotate the image in the originals.

Item	Description
Collation	<p>Set the machine to sort the copy job. For example, if you make 2 copies of a 3 page original, one complete 3 page document will print followed by a second complete document.</p> <ul style="list-style-type: none"> • On: Prints output in sets to match the sequence of originals. 
	<ul style="list-style-type: none"> • Off: Prints output sorted into stacks of individual pages. 
Layout	Adjusts the layout format such as ID Copy , N-Up , etc.

Copy features on the control panel



Item	Description
Adjust Background	<p>Prints an image without its background. This copy feature removes the background color and can be helpful when copying an original containing color in the background, such as a newspaper or a catalog.</p> <ul style="list-style-type: none">• Off: Does not use this feature.• Auto: Optimizes the background.• Enhance Lev.1~2: The higher the number is, the more vivid the background is.• Erase Lev.1~4: The higher the number is, the lighter the background is.

Copy Setup



Some menus may not appear in the display depending on options or models. If so, it is not applicable to your machine (see "Copy Setup Menu" on page 23).

To change the menu options:





Press  (copy) >  (**Menu**) > **Copy Setup** on the control panel.

Or  (**Menu**) > **Copy Setup** on the control panel.


Item	Description
Change Default	The copy options can be set to those most frequently used.
Auto Tray	This is the option to set if the machine is to continue printing or not when any tray becomes empty.

Basic copying

Basic copy

- 1 Select  (copy) >  (**Menu**) > **Copy Feature** on the control panel.
Or select  (**Menu**) > **Copy Feature** on the control panel.
- 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 37).
- 3 If you want to customize the copy settings including **Reduce/Enlarge**, **Darkness**, **Original Type** and more by using the control panel buttons (see "Changing the settings for each copy" on page 85).
- 4 Enter the number of copies using the arrow or number keypad, if necessary.
- 5 Press  (**Start**).




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

Changing the settings for each copy

Your machine provides default settings for copying so that you can quickly and easily make a copy.






- If you press the  (**Stop**) button twice while setting the copy options, all of the options you have set for the current copy job will be canceled and returned to their default status. Or, they will automatically return to their default status after the machine completes the copy in progress.
- Accessing menus may differ from model to model (see "Accessing the menus" on page 21).
- It may be necessary to press **OK** to navigate to lower-level menus for some models.

Darkness




If you have an original containing faint marking and dark images, you can adjust the brightness to make a copy that is easier to read.

Basic copying

- 1 Select  (copy) >  (Menu) > **Copy Feature** > **Darkness** on the control panel.
Or press **Darkness** on the control panel.
- 2 Select the option you want and press **OK**.
For example, the **+5** being the lightest, and the **-5** being the darkest.
- 3 Press  (**Stop**) button to return to ready mode.

Original Type

The original setting is used to improve the copy quality by selecting the document for the current copy job.

- 1 Select  (copy) >  (Menu) > **Copy Feature** > **Original Type** on the control panel.
Or select  (Menu) > **Copy Feature** > **Original Type** on the control panel.
- 2 Select the option you want and press **OK**.
 - **Text**: Use for originals containing mostly text.
 - **Text/Photo**: Use for originals with mixed text and photographs.



If texts in the printout is blurry, select **Text** to get the clear texts.

- **Photo**: Use when the originals are photographs.
- **Map**: Use when the originals are map.

- 3 Press  (**Stop**) button to return to ready mode.





Reduced or enlarged copy

You can reduce or enlarge the size of a copied image from 25% to 400% from the document feeder or scanner glass.





- This feature may not be available depending on model or optional goods (see "Variety feature" on page 7).
- If the machine set to Eco mode, reduce and enlarge features are not available.



To select from the predefined copy sizes

- 1 Select  (copy) >  (Menu) > **Copy Feature** > **Reduce/Enlarge** on the control panel.
Or select  (Menu) > **Copy Feature** > **Reduce/Enlarge** on the control panel.
- 2 Select the option you want and press **OK**.
- 3 Press  (**Stop**) button to return to ready mode.

Basic copying

To scale the copy by directly entering the scale rate

- 1 Select  (copy) >  (Menu) > **Copy Feature** > **Reduce/Enlarge** > **Custom** on the control panel.

Or select  (Menu) > **Copy Feature** > **Reduce/Enlarge** > **Custom** on the control panel.
- 2 Enter the copy size you want using the numeric keypad.
- 3 Press **OK** to save the selection.
- 4 Press  (**Stop**) button to return to ready mode.



When you make a reduced copy, black lines may appear at the bottom of your copy.

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.



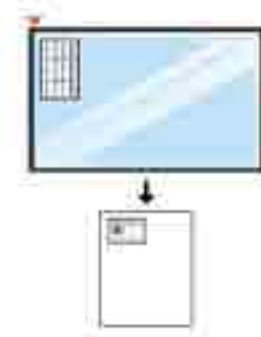
- The original must be placed on the scanner glass to use this feature.
- If the machine set to Eco mode, this feature is not available.


Depending on the model, the operating procedure may differ.

- 1** Press **ID Copy** on the control panel.
Or select  (**Menu**) > **Copy Feature** > **Layout** > **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.



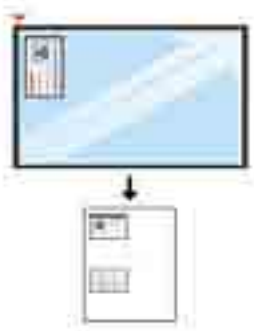
To get a better image, close the scanner lid and lightly press the scanner lid.



- 3** **Place Front Side Press [Start]** appears on the display.
- 4** Press  (**Start**).
Your machine begins scanning the front side and shows **Place Rear Side Press [Start]**.


ID card copying

- 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.



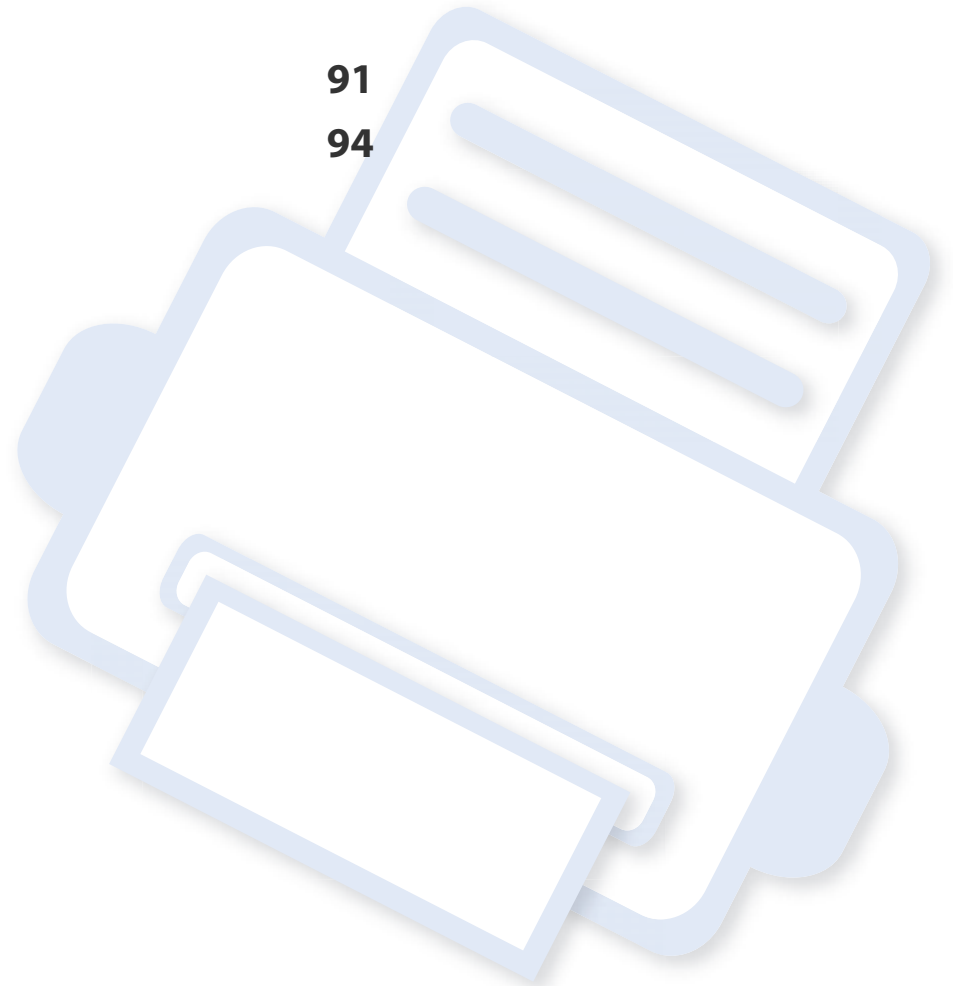
8. Scanning

This chapter explains the normal and usual procedure for scanning originals.

- **Scanning from the machine**
- **Scanning from a computer**

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Scanning from the machine

Scan feature




Some menus may not appear in the display depending on options or models. If so, it is not applicable to your machine (see "Scan Menu" on page 27).


To change the menu options:


- Press  (scan) > **Scan To PC** on the control panel.

Item	Description
Local PC	Sets scan destination to a usb-connected computer. You scan the originals and save the scanned image to a directory such as My Documents (see "Basic scanning" on page 93).
Network PC	Sets scan destination to a network-connected computer. You scan the originals and save the scanned image to a directory such as My Documents (see "Scanning from network connected machine" on page 96).

Item	Description
File Format	<p>Sets the file format in which the image is to be saved. If you select JPEG, TIFF or PDF, you can select to scan multiple pages. Depending on the selected scan type, this option may not appear.</p> <ul style="list-style-type: none">• Multi-Page PDF: Scans originals in PDF, but several originals are scanned as one file.• Single-Page PDF: Scans the originals in PDF, and several originals are scanned as an each individual PDF file.• Multi-Page TIFF: Scans originals in TIFF (Tagged Image File Format), but several originals are scanned as one file.• Single-Page TIFF: Scans the originals in TIFF (Tagged Image File Format), and several originals are scanned as an each individual TIFF file.• JPEG: Scans original in JPEG format. <p> • The file format JPEG cannot be selected in the File Format option, if Mono has been selected for Color Mode.</p>

Scanning from the machine

Item	Description
Color Mode	<p>You can select the color options of scan outputs.</p> <ul style="list-style-type: none">• Color: Uses color to display an image. 24 bits per pixel, 8 bits for each RGB, is used for 1 pixel.• Gray: Uses the black gradation to display an image. 8 bits per pixel. 
Resolution	Sets the image resolution.
Original Size	Sets the image size.

Item	Description
Duplex	<p>Selects if the machine scans one side of the paper (1 Sided), both sides of the paper (2 Sided), or both sides of the paper (2 Sided Rotated).</p> <ul style="list-style-type: none">• 1 Sided: For originals that are printed on one side only.• 2 Sided, Book: For originals that are printed on both sides.• 2 Sided, Calendar: For originals that are printed on both sides, but the back is rotated 180 degrees. <div data-bbox="1491 711 2197 954"> If an original is placed on the scanner glass, the machine shows the window asking to place another page. Load another original and press Yes. When you finish, select No for this option.</div>

Scanning from the machine

Basic scanning

This is the normal and usual procedure for scanning originals.

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



- Accessing menus may differ from model to model.
- It may be necessary to press **OK** to navigate to lower-level menus for some models.

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 37).

2 Select  (scan) > **Scan To PC** on the control panel.




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

4 Select the option you want and press **OK**.

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.

Scanning from a computer



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.

Setting the scan settings in the computer

- 1 Open **Samsung Easy Printer Manager** (see "Using Samsung Easy Printer Manager" on page 137).
- 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 in 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 37).
- 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.

Scanning from a computer

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 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 37).
- 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 how your preferences affect the picture.
- 7 Scan and save your scanned image.

Scanning with Samsung Easy Document Creator


Samsung Easy Document Creator is an application to help users scan, compile, and save documents in multiple formats, including .epub format.



We recommend using scan features with the Samsung Easy Document Creator program provided in the supplied software CD.




- Available for Windows OS users only.
- Windows XP or higher and Internet Explorer 6.0 or higher is the minimum requirement for Samsung Easy Document Creator.
- Samsung Easy Document Creator is installed automatically when you install the machine software.

Scanning from a computer


- 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 37).
- 2 From the **Start** menu select **Programs** or **All Programs**.
 - For Windows 8, from **Charms**, select **Search > Apps**.
- 3 Click **Samsung Printers**, and start **Samsung Easy Document Creator**.
Click **Scan** () from the home screen.
- 4 Select the type of scanning or a favorites then click **Start**.
- 5 Make adjustments to the image (**Scan Settings** and **More Options**).
- 6 Click **Scan** to scan a final image or **Prescan** to get another preview image.
- 7 Select to **Save to Location**, **Send to E-mail**, or **Send to SNS**.
- 8 Click on **Save** (Saving a Scan), **Send** (E-mailing a Scan), or **Share** (Uploading).

 If there is room on the document glass, more than one item can be scanned at the same time. Use the  tool to make multiple selection areas.

Scanning from network connected machine

 This feature is not available for the machine that does not support the network interface (see "Rear view" on page 17).

Make sure the printer driver is installed on your computer using the software CD, since the printer driver includes the scan program (see "Installation for Windows" on page 44).



- 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 37).
- 2 Select  (Scan) > **Scan To PC** > **Network PC** on the control panel.

 If you see **Not Available** message, check the port connection.

- 3 Select your registered computer **ID**, and enter the **Password** if necessary.

Scanning from a computer



- **ID** is the same ID as the registered scan ID for **Samsung Easy Printer Manager** >  Switch to advanced mode > **Scan to PC Settings**.
- **Password** is the 4 digit number registered password for **Samsung Easy Printer Manager** >  Switch to advanced mode > **Scan to PC Settings**.

4 Select the option you want and press **OK**.

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.

Scanning to WSD

Scans the originals and saves the scanned data on a connected computer if the computer supports the WSD (Web Service for Device) feature. To use the WSD feature, you need to install the WSD printer driver on your computer. For Windows 7, you can install the WSD driver by **Control Panel > Devices and Printers > Add a printer**. Click **Add a network printer** from the wizard.



- The machine that does not support the network interface, it will not be able to use this feature (see "Features by model" on page 7).
- The WSD feature works only with Windows Vista® or later version that are the WSD-compliant computer.
- The following installation steps are based on Windows 7 computer.

Installing a WSD Printer Driver

- 1** Select **Start > Control Panel > Devices and Printers > Add a printer**.
- 2** Click **Add a network, wireless or Bluetooth printer** from the wizard.
- 3** In the printers list, select the one you want to use, and then click **Next**.


Scanning from a computer



- The IP address for WSD printer is `http://IP address/ws/` (example: `http://111.111.111.111/ws/`).
- If no WSD printer is displayed in the list, click **The printer that I want isn't listed** > **Add a printer using a TCP/IP address or hostname** and select **Web Services Device** from **Device type**. Then enter the printer's IP address.

4 Follow the instructions in the installation window.

Scanning using the WSD feature

- 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 37).
- 3 Select  (scan) > **Scan to WSD** on the control panel.



If you see **Not Available** message, check the port connection. Or check the printer driver for WSD is correctly installed.

4 Select your computer name from **Destination List**.

- 5 Select the option you want and press **OK**.
- 6 Scanning begins.




Scanning from a computer

Scanning from Windows 8


Scanning with your machine lets you turn pictures and text into digital files that can be stored on your computer.

Scanning from Samsung Printer Experience

The most frequently used printing menus are displayed for quick scanning.

- 1 Place a single document face down on the document glass, or load the documents face up into the document feeder.
- 2 Click the **Samsung Printer Experience** tile on the **Start** screen.
- 3 Click **Scan** ().
- 4 Set up the scanning parameters such as image type, document size, and resolution.
- 5 Click **Prescan** () to check the image.
- 6 Adjust the prescanned image with scanning operation functions such as rotate and mirror.
- 7 Click **Scan** () and save the image.

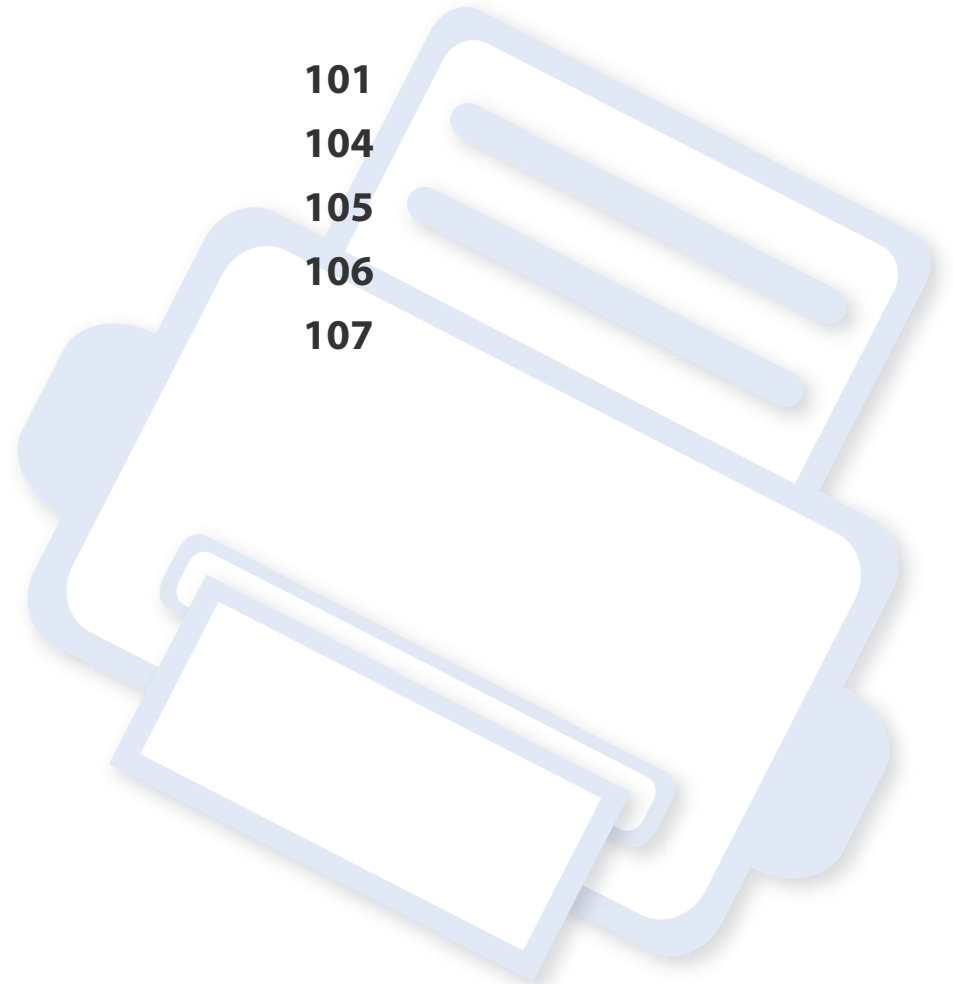


- When you place the originals in the ADF (or RADF), **Prescan** () is not available.
- You can skip step 5, if the Prescan option is selected.



9. System and Other Settings

- Machine setup 101
- Paper setup 104
- Report 105
- Maintenance 106
- Network setup 107



Machine setup





Some menus may not appear in the display depending on options or models. If so, it is not applicable to your machine (see "System Setup Menu" on page 25).

To change the menu options:



- Press  (**Menu**) > **System Setup** > **Machine Setup** on the control panel.

Item	Description
Date & Time	Sets the date and time.
Clock Mode	Selects the format for displaying time between 12 hr. and 24 hr.
Language	Sets the language of the text that appears on the control panel display.
Power Save	Sets how long the machine waits before going to power save mode. When the machine does not receive data for an extended period of time, power consumption is automatically lowered.
System Timeout	Sets the time that the machine remembers previously used copy settings. After the timeout, the machine restores the default copy settings.


Item	Description
Job Timeout	Sets the length of time the printer waits before printing the last page of a print job that does not end with a command to print the page.
Wakeup Event	When this option is " On ", you can wake up the machine from the power saving mode with the following actions: <ul style="list-style-type: none"> loading paper in a tray opening or closing the front cover pulling a tray out or pushing a tray in
Auto Power Off	Turns power off automatically when the machine has been in power save mode for the length of time set in Auto Power Off > On > Timeout . <div data-bbox="1473 852 2192 1321" data-label="Complex-Block" style="border: 1px solid #ccc; padding: 10px; margin-top: 10px;">  <ul style="list-style-type: none"> To turn the machine on again, Press the  (Power / Wake Up) button on the control panel. If you run the printer driver or Samsung Easy Printer Manager, the time automatically extends. While the machine is connected to the network or working on a print job, Auto Power Off feature doesn't work. </div>
Humidity	Optimizes print quality according to the humidity in the environment.

Machine setup

Item	Description
Paper Stacking	If you use a machine in a humid area, or you are using the damp print media caused by a high humidity, the print-outs on the output tray may be curled and may not be stacked properly. In this case, you can set the machine to use this function to let print-outs stacked firmly. But, using this function will make the print speed slow.
Auto Continue	<p>Determine whether or not the machine continues printing when it detects the paper does not match the paper settings.</p> <ul style="list-style-type: none">• 0 Sec: This option allows you to continue printing when the paper size you have set is mismatched with the paper in the tray.• 30 Sec: If a paper mismatch occurs, an error message will display. The machine waits for about 30 second, then automatically clear the message and continue printing.• Off: If a paper mismatch occurs, the machine waits until you insert the correct paper.
Altitude Adjustment	Optimize print quality according to the machine's altitude.

Item	Description
Auto Tray Switch	<p>Determine whether or not the machine continues printing when it detects the paper does not match. For example, if both tray 1 and tray 2 are filled with the same size paper, the machine automatically prints from tray 2 after the tray 1 runs out of paper.</p> <p> This option does not appear if you selected Auto for Paper Source from printer driver.</p>
Paper Substitution	Automatically substitutes the printer driver's paper size to prevent the paper mismatch between Letter and A4. For example, if you have A4 paper in the tray but you set the paper size to Letter in the printer driver, the machine prints on A4 paper and vice versa.
Tray Protection	<p>Decides to use or not use the Auto tray switch feature. If you set tray 1 to On, for example, then tray 1 is excluded during tray switching.</p> <p> This setting works for copy or print jobs.</p>

Machine setup

Item	Description
Eco Settings	<p>Allows you to save print resources and enables eco-friendly printing.</p> <ul style="list-style-type: none">• Default Mode: Select whether to turn the Eco mode on or off. <div data-bbox="353 488 1079 684"> On force (On-Forced): Sets the Eco mode on with password. If a user wants to turn the Eco mode on/off, the user needs to enter the password.</div> <ul style="list-style-type: none">• Select Template: Selects the eco template set from the SyncThru™ Web Service.

Paper setup



Some menus may not appear in the display depending on options or models. If so, it is not applicable to your machine (see "System Setup Menu" on page 25).

To change the menu options:

- Press  (**Menu**) > **System Setup** > **Paper Setup** on the control panel.

Item	Description
Paper Size	Sets the paper size as A4, Letter, or other paper sizes, according to your requirements.
Paper Type	Chooses the type of the paper for each tray.
Paper Select	Selects from which tray the paper is used.
Margin	Sets the margins for the document.
Tray Confirmation	Activates the tray confirmation message. If you open and close a tray, a window asking you whether to set the paper size and type for the tray just opened appears.

Report



Some menus may not appear in the display depending on options or models. If so, it is not applicable to your machine (see "System Setup Menu" on page 25).

To change the menu options:

- Press  (**Menu**) > **System Setup** > **Report** on the control panel.

Item	Description
Configuration	Prints a report on the machine's overall configuration.
Demo Page	Prints the demo page to check whether your machine is printing properly or not.
Network Configuration	Prints information on your machine's network connection and configuration.
Supplies Information	Prints supplies' information page.
Usage Counter	Prints a usage page. The usage page contains the total number of pages printed.
PCL Font	Prints the PCL font list.

Maintenance



Some menus may not appear in the display depending on options or models. If so, it is not applicable to your machine (see "System Setup Menu" on page 25).

To change the menu options:

- Press  (**Menu**) > **System Setup** > **Maintenance** on the control panel.

Item	Description
Supplies Life	Shows the supply life indicators (see "Monitoring the supplies life" on page 123.)
Image Mar.	Allows you to adjust the color setting such as color registration, color density, etc.
Toner Low Alert	Customizes the alert toner low or toner empty (see "Setting the toner low alert" on page 124).
OPC Unit Low Alert	Customizes the level to alert toner low or toner empty.
Serial Number	Shows the machine's serial number. When you call for service or register as a user on the Samsung website, you can find this.

Network setup



Some menus may not appear in the display depending on options or models. If so, it is not applicable to your machine (see "Accessing the menus" on page 21).





For network model, You can also use this feature from the SyncThru™ Web Service. Open the Web browser from your networked computer and type the IP address of your machine. When SyncThru™ Web Service opens, click **Settings > Network Settings** (see "Using SyncThru™ Web Service" on page 133).

- Press **(Menu)** > **Network** on the control panel,

Option	Description
TCP/IP (IPv4)	<p>Selects the appropriate protocol and configure parameters to use the network environment (see "Setting IP address" on page 52).</p> <div style="border: 1px solid #ccc; padding: 5px; margin-top: 10px;"> There are lots of parameters to be set. If you are not sure, leave as is, or consult the network administrator. </div>
TCP/IP (IPv6)	<p>Selects this option to use the network environment through IPv6 (see "IPv6 configuration" on page 49).</p>

Option	Description
Ethernet	<p>Configure the network transmission speed or port.</p> <div style="border: 1px solid #ccc; padding: 5px; margin-top: 10px;"> Turn the power off and on after you change this option. </div>
Clear Settings	<p>Reverts the network settings to the default values.</p> <div style="border: 1px solid #ccc; padding: 5px; margin-top: 10px;"> Turn the power off and on after you change this option. </div>
Network Configuration	<p>This list shows information on your machine's network connection and configuration.</p>
Protocol Management	<p>HTTP</p> <p>You can set whether to use SyncThru™ Web Service or not.</p> <div style="border: 1px solid #ccc; padding: 5px; margin-top: 10px;"> Turn the power off and on after you change this option to Off. </div>
	<p>WINS</p> <p>You can configure the WINS server. WINS (Windows Internet Name Service) is used in the Windows operating system.</p>

Network setup

Option	Description
Protocol Management	SNMP V1/V2 You can set SNMP (Simple Network Management Protocol). Administrator's can use SNMP to monitor and manage machines on the network.
	UPnP(SSDP) You can set UPnP protocol.  Turn the power off and on after you change this option to Off .
	MDNS You can set mDNS (Multicast Domain Name System) settings.
	SetIP You can set SetIP settings.
	SLP You can configure SLP (Service Location Protocol) settings. This protocol allows host applications to find services in a local area network without prior configuration.  Turn the power off and on after you change this option to Off .



10. Maintenance

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

- **Ordering supplies and accessories** 110
- **Available consumables** 111
- **Available accessories** 112
- **Available maintenance parts** 113
- **Storing the consumables** 114
- **Redistributing toner** 116
- **Replacing the toner cartridge** 118
- **Replacing the imaging unit** 120
- **Monitoring the supplies life** 123
- **Setting the toner low alert** 124
- **Cleaning the machine** 125



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.

- See "Available consumables" on page 111.
- See "Available accessories" on page 112.
- See "Available maintenance parts" on page 113.

To order Samsung-authorized supplies, accessories, and maintenance parts, contact your local Samsung dealer or the retailer where you purchased your machine. You can also visit www.samsung.com/supplies, and then select your country/region to obtain the contact information for service.

Available consumables

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

Type	Average yield ^a	Part name
Toner cartridge	Approx. 6,000 pages ^b	MLT-D707S
	Approx. 10,000 pages	MLT-D707L
Imaging unit	Approx. 80,000 pages (Based on 3 average letter/A4 size pages for print job)	MLT-R707

a. Declared yield value in accordance with BLI 6%. The number of pages may be affected by operating environment, printing interval, graphics, media type and media size.

b. Supported for China only.



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.



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

Available accessories

You can purchase and install accessories to enhance your machine's performance and capacity.



Some features and optional goods may not be available depending on model or country (see "Features by model" on page 7).

Accessory	Function	Part name
Optional tray ^a	If you are experiencing frequent paper supply problems, you can attach an additional 520 ^b sheet tray.	SL-SCF2080
RADF ^a	Reverse Automatic Document Feeder.	SL-ADF250D

a. K2200ND Only.

b. Plain paper 80 g/m² (20 lbs bond).

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.

Parts	Average yield^a
Transfer roller	Approx. 100,000 pages
Fuser unit	Approx. 100,000 pages
MP pick up roller	Approx. 100,000 pages
Tray1 pick up roller	Approx. 100,000 pages
Tray2 pick up roller	Approx. 100,000 pages
MP Friction Pad	Approx. 50,000 pages
Tray1 friction pad	Approx. 50,000 pages
Tray2 friction pad	Approx. 50,000 pages
Document feeder(RADF) Roller	Approx. 120,000 pages
Document feeder(RADF) Rubber	Approx. 50,000 pages

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

Storing the consumables

Consumables contain components that are sensitive to light, temperature and humidity. Samsung suggests users follow these recommendations to ensure optimal performance, highest quality, and longest life from your new Samsung consumables.

Store the consumables in the same environment in which the printer will be used. This should be in controlled temperature and humidity conditions. The consumables should remain in their original and unopened package until installation.

If the consumables are removed from the printer, follow the instructions below to store the imaging unit 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.

Storing the consumables

Imaging unit handling instructions

- Opening the imaging unit package prior to use dramatically shortens its useful shelf and operating life. Do not store on the floor.
- If original packaging is not available, cover the top opening of the imaging unit with paper and store in a dark cabinet.
- Do not touch the surface of the photoconductive drum in the imaging unit.
- Do not expose the imaging unit 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

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



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

Estimated toner 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 varies from side to side.
- The **Status** LED blinks red. The toner-related message saying that the toner is low may appear on the display.
- The computer's Samsung Printing Status program window appears on the computer telling you which cartridge is low on toner.

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.

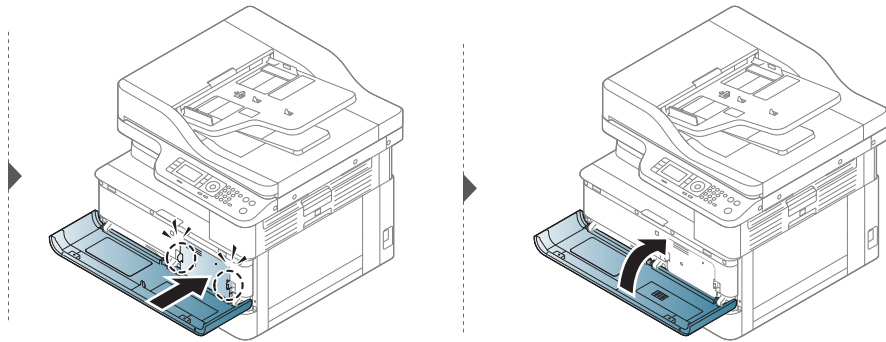
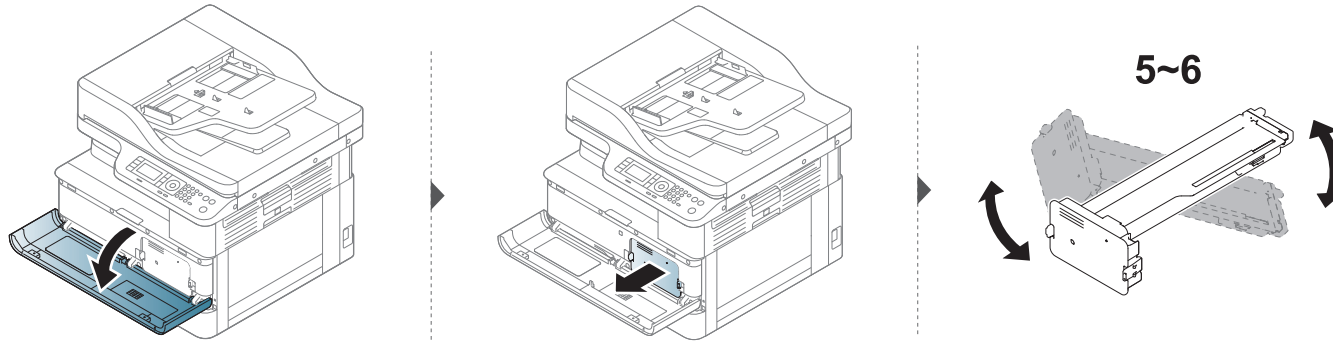


Illustrations on this user's guide may differ from your machine depending on its options or models. Check your machine type (see "Front view" on page 16).

Redistributing toner



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.



Replacing the toner cartridge

A toner cartridge has almost reached its estimated cartridge life:

- The status LED and the toner-related message on the display indicate when the toner cartridge should be replaced.
- The computer's Samsung Printing Status Program window appears on the computer telling you cartridge is empty on toner.

Check the type of the toner cartridge for your machine (see "Available consumables" on page 111).



- 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 16).



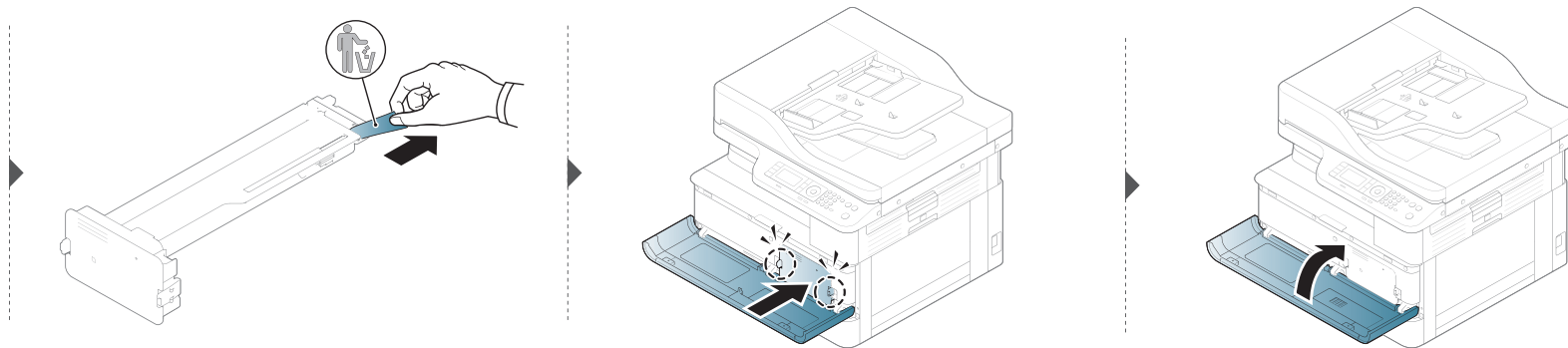
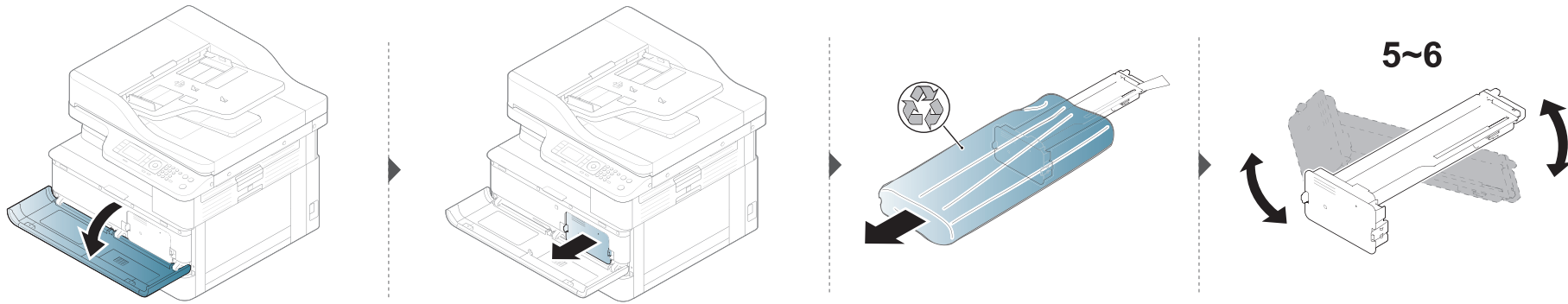
- If toner gets on your clothing, wipe it off with a dry cloth and wash clothing in cold water. Hot water sets toner into fabric.

Replacing the toner cartridge

Replacing the toner cartridge



Click this link to open an animation about clearing a jam.



Replacing the imaging unit



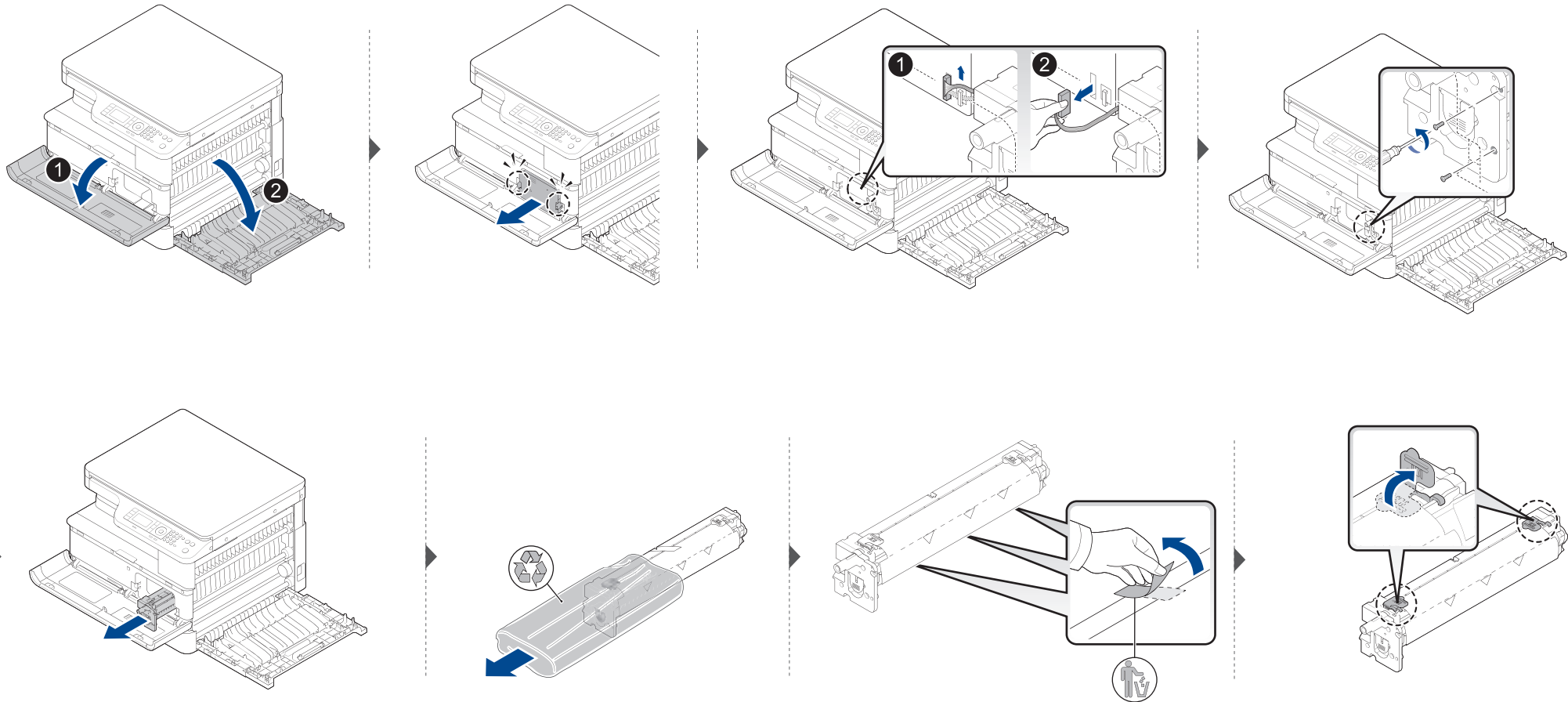
- To prevent damage to the imaging unit, do not expose it to light for more than a few minutes. Cover it with a piece of paper, if necessary.
- Do not touch the green area of the imaging unit. Use the handle on the imaging unit to avoid touching this area.
- Do not use sharp objects such as a knife or scissors to open the imaging unit package. They might scratch the drum of the imaging unit.

Replacing the imaging unit

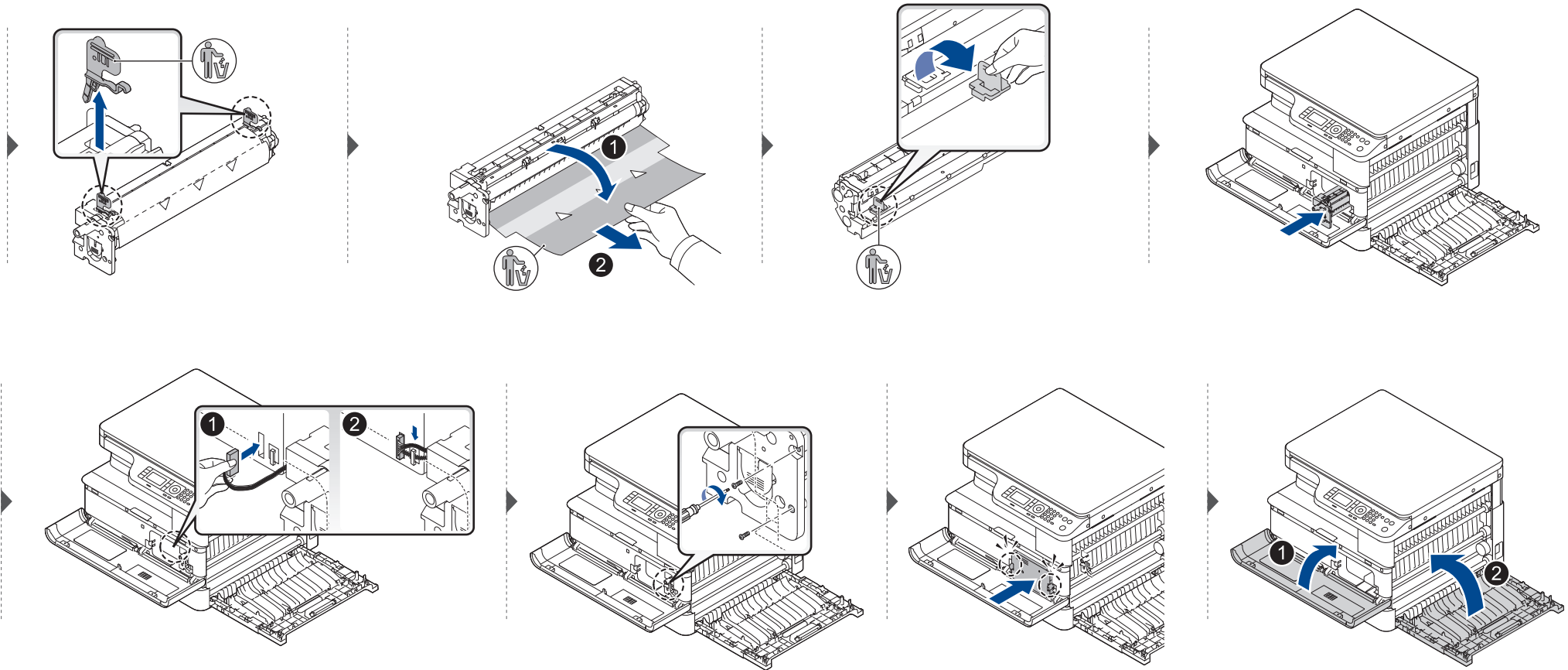
Replacing the imaging unit



Click this link to open an animation about replacing a imaging unit.



Replacing the imaging unit





Monitoring the supplies life

If you experience frequent paper jams or printing problems, check the number of pages the machine has printed or scanned. Replace the corresponding parts, if necessary.




- Some menus may not appear in the display depending on options or models. If so, it is not applicable to your machine.
- It may be necessary to press **OK** to navigate to lower-level menus for some models.


- 1 Select  (**Menu**) > **System Setup** > **Maintenance** > **Supplies Life** on the control panel.
- 2 Select the option you want and press **OK**.
- 3 Press  (**Stop**) button to return to ready mode.

Setting the toner low alert

If the amount of toner in the cartridge is low, a message or LED informing the user to change the toner cartridge appears. You can set the option for whether or not this message or LED appears.



- It may be necessary to press **OK** to navigate to lower-level menus for some models.
- You can set the machine's settings by using the **Device Settings** in Samsung Easy Printer Manager program.
 - For Windows users, you set from **Samsung Easy Printer Manager** >  **(Switch to advanced mode)** > **Device Settings**, see "Device Settings" on page 114.

- 1 Select  **(Menu)** > **System Setup** > **Maintenance** > **Toner Low Alert** on the control panel.
- 2 Select the option you want.
- 3 Press **OK** to save the selection.

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.



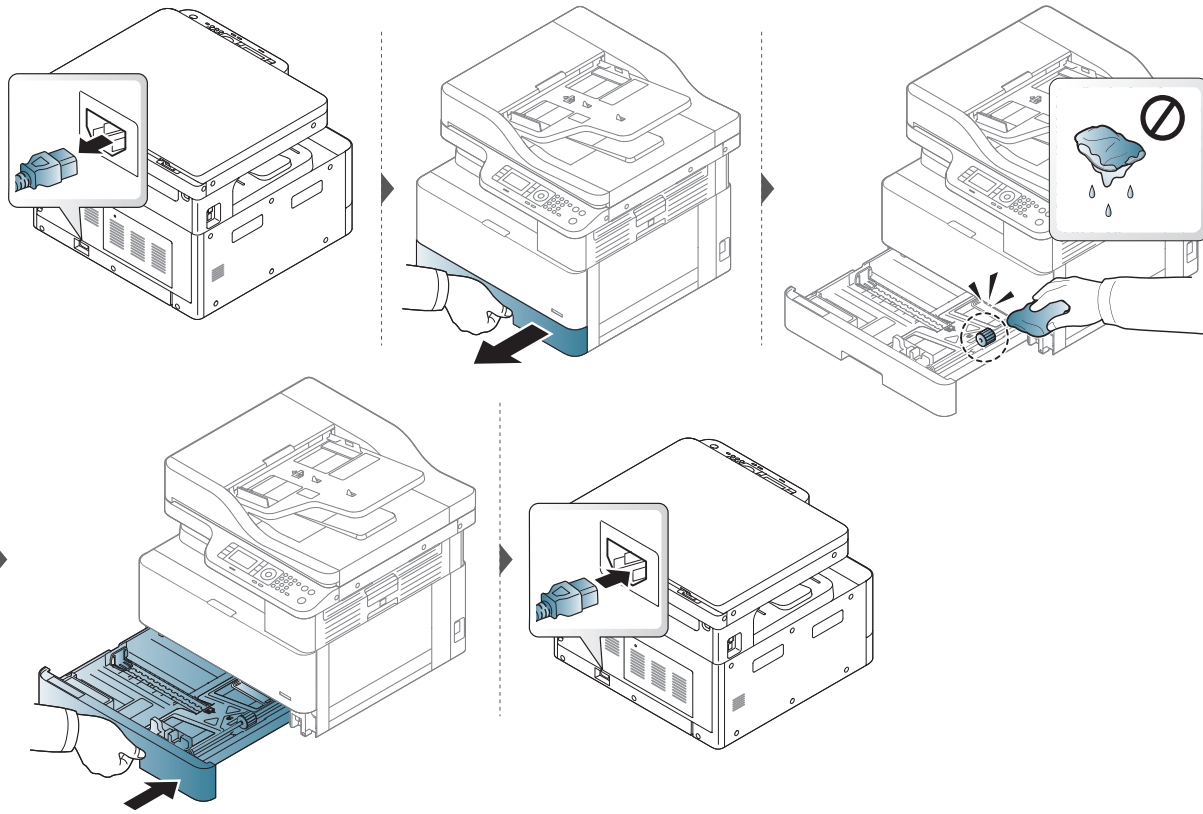
- Use a dry lint-free cloth to clean the machine.
- Turn the machine off and unplug the power cord. Wait for the machine to cool down. If your machine has a power switch, turn the power switch off before cleaning the machine.
- Illustrations on this user's guide may differ from your machine depending on its options or models. Check your machine type (see "Front view" on page 16).

Cleaning the machine

Cleaning the roller

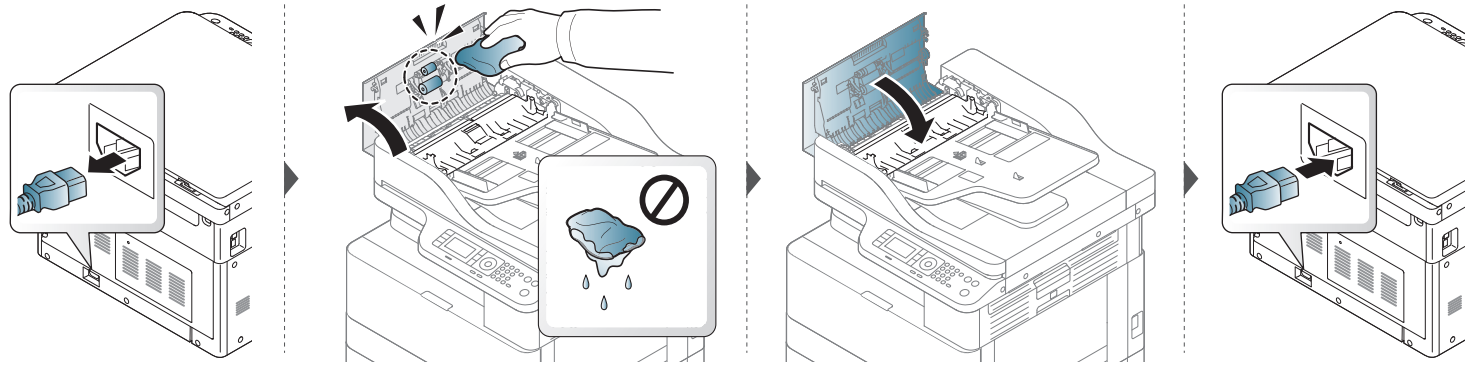


- Turn the machine off and unplug the power cord. Wait for the machine to cool down. If your machine has a power switch, turn the power switch off before cleaning the machine.
- Illustrations on this user's guide may differ from your machine depending on its options or models. Check your machine type (see "Front view" on page 16).



Cleaning the machine

K220xND series only.



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.

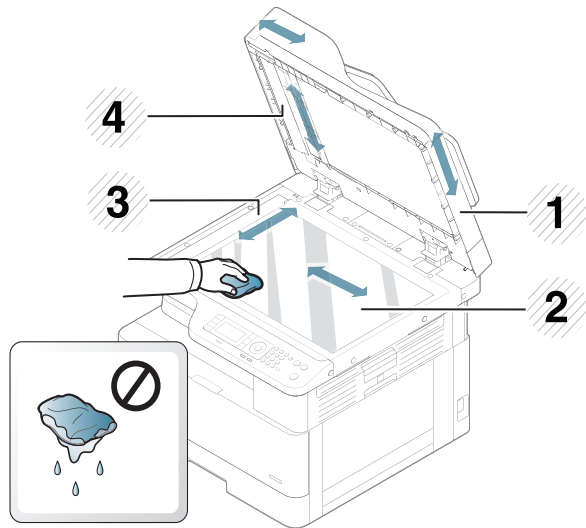


- Turn the machine off and unplug the power cord. Wait for the machine to cool down. If your machine has a power switch, turn the power switch off before cleaning the machine.
- Illustrations on this user's guide may differ from your machine depending on its options or models. Check your machine type (see "Front view" on page 16).

- 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 surface of the scanner until it is clean and dry.



- 1 Scanner lid
- 2 Scanner glass
- 3 Document feeder glass
- 4 White bar

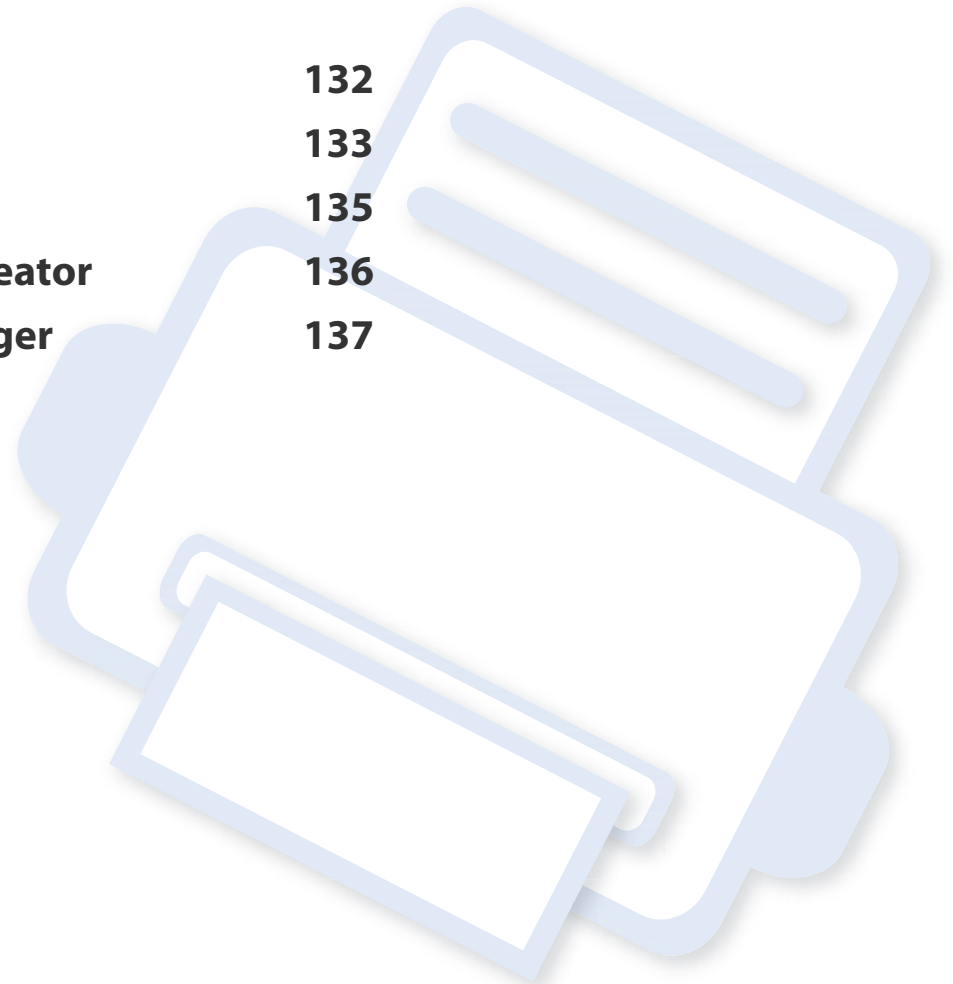
- 4 Close the scanner lid.



11. Useful Setting

This chapter explains how to browse the current status of your machine, and the method of setting for advanced machine setup.


- **Machine's basic settings** 132
- **Using SyncThru™ Web Service** 133
- **Altitude adjustment** 135
- **Using Samsung Easy Document Creator** 136
- **Using Samsung Easy Printer Manager** 137



Machine's basic settings



You can set the machine's settings by using the **Device Settings** in Samsung Easy Printer Manager program.


- For Windows users, see "Device Settings" on page 114.
 - You set from **Samsung Easy Printer Manager** >  **(Switch to advanced mode)** > **Device Settings**, see "Device Settings" on page 114.

After installation is complete, you may want to set the machine's default settings.


To change the machine's default settings, follow these steps:




It may be necessary to press **OK** to navigate to lower-level menus for some models.

- 1** Select  **(Menu)** > **System Setup** > **Machine Setup** on the control panel.
- 2** Select the option you want, then press **OK**.



When you press the  **(Power / Wake Up)** button, start printing, the product will wake up from the power saving mode.

- 3** Select the option you want, then press **OK**.
- 4** Press **OK** to save the selection.
- 5** Press  **(Stop)** button to return to ready mode.

Using SyncThru™ Web Service



- Internet Explorer 8.0 or higher is the minimum requirement for SyncThru™ Web Service.
- SyncThru™ 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 8).

Logging into SyncThru™ 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.
- 3 Click **Login** on the upper right of the SyncThru™ Web Service website.
- 4 Type in the **ID** and **Password** then click **Login**. We recommend you to change the default password for security reasons.
 - **ID: admin**
 - **Password: sec00000**

SyncThru™ Web Service overview



Information

Settings

Security

Maintenance



Some tabs may not appear depending on your model.

Information tab

This tab gives you general information about your machine. You can check the following information here: the alerts that have occurred in the machine and their severity, the amount of toner left in the cartridge, the usage count by print type (simplex or duplex), the machine and network information, and the machine's security information.

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.

Using SyncThru™ Web Service

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.

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 Samsung website or download drivers by selecting the **Link** menu.

Setting the system administrator's information

This setting is necessary for using the e-mail notification option.



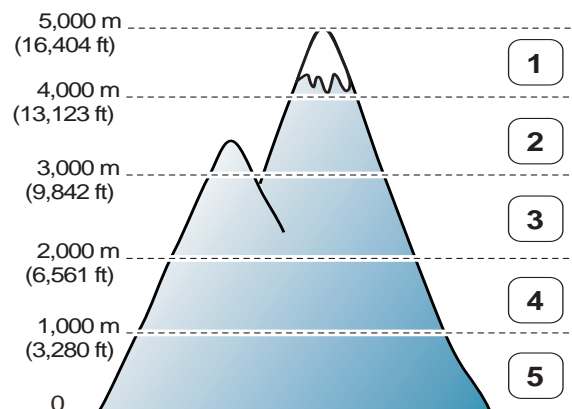
Some menus may not appear in the display depending on options or models. If so, it is not applicable to your machine.

- 1 Start a web browser, such as Internet Explorer, from Windows.
Enter the machine IP address (http://xxx.xxx.xxx.xxx) in the address field and press the Enter key or click **Go**.
- 2 Your machine's embedded website opens.
- 3 From the **Security** tab, select **System Security > System Administrator**
- 4 Enter the name of the administrator, phone number, location, and email address.
- 5 Click **Apply**.

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.



- 1 High 4
- 2 High 3
- 3 High 2
- 4 High 1
- 5 Normal

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

- For Windows users, you set from **Samsung Easy Printer Manager** >  **(Switch to advanced mode) > Device Settings**, see "Device Settings" on page 114.



- If your machine is connected to the network, you can set the altitude via SyncThru™ Web Service (see "Using SyncThru™ Web Service" on page 133).
- You can also set the altitude in **System Setup** option on the machine's display (see "Machine's basic settings" on page 132).

Using Samsung Easy Document Creator

Samsung Easy Document Creator 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. Whether you're a student needing to organize research from the library or a stay-at-home mom sharing scanned pictures from last year's birthday party, Samsung Easy Document Creator will provide you with the necessary tools.

The Samsung Easy Document Creator provides features below:

- **Image Scanning:** Use for scanning single or multiple pictures.
- **Document Scanning:** Use for scanning documents with text or text and images.
- **Text Converting:** Use for scanning documents that need to be saved in an editable text format.
- **Book Scanning:** Use for scanning books with the flatbed scanner.
- **SNS Upload:** Provides an easy and quick way to upload scanned image or existing images to a variety of social networking sites (SNS).
- **E-Book Conversion:** Provides the ability to scan multiple documents in as one e-book or convert existing files into an e-book format.
- **Plug-in:** Scan and convert to E-Book directly from the Microsoft Office program.



Click the **Help** (🔍) button from the window and then click on any option you want to know about.

Using Samsung Easy Printer Manager



- This feature may not be available depending on model or optional goods (see "Software" on page 8).
- Available for Windows users only (see "Software" on page 8).
- For Windows, Internet Explorer 6.0 or higher is the minimum requirement for Samsung Easy Printer Manager.

Samsung Easy Printer Manager is an application that combines Samsung machine settings into one location. Samsung Easy 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 Samsung machine. Samsung Easy 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 Samsung Easy Printer Manager

To open the program:

For Windows,

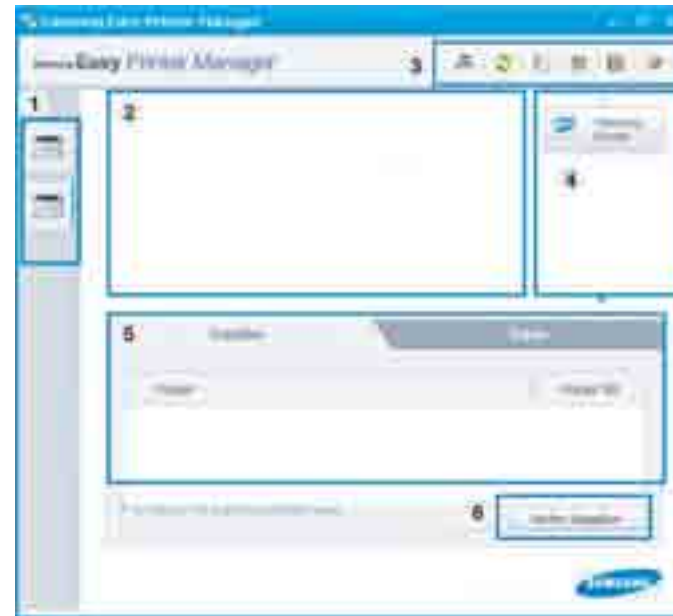
Select **Start > Programs** or **All Programs > Samsung Printers > Samsung Easy Printer Manager**.

- For Windows 8, from **Charms**, select **Search > Apps > Samsung Printers > Samsung Easy Printer Manager**.




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




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




Using Samsung Easy Printer Manager

1	Printer list	The Printer List displays printers installed on your computer and network printers added by network discovery (Windows only).
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 User's Guide.</p> <p>Troubleshooting button: This button opens the Troubleshooting Guide when an error occurs. You can directly open the necessary section in the user's guide.</p>
3	Application information	<p>Includes links for changing to the advanced settings (switching UI), refresh, preference setting, summary, help, and about.</p> <p> The  button is used to change the user interface to the advanced settings user interface (see "Advanced settings user interface overview" on page 139).</p>

4	Quick links	<p>Displays Quick links 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 SyncThru™ Web Service icon is enabled.</p>
5	Contents area	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.
6	Order supplies	Click on the Order button from the supply ordering window. You can order replacement toner cartridge(s) from online.



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

Using Samsung Easy 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.
- **Basic tab:** Contains 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.

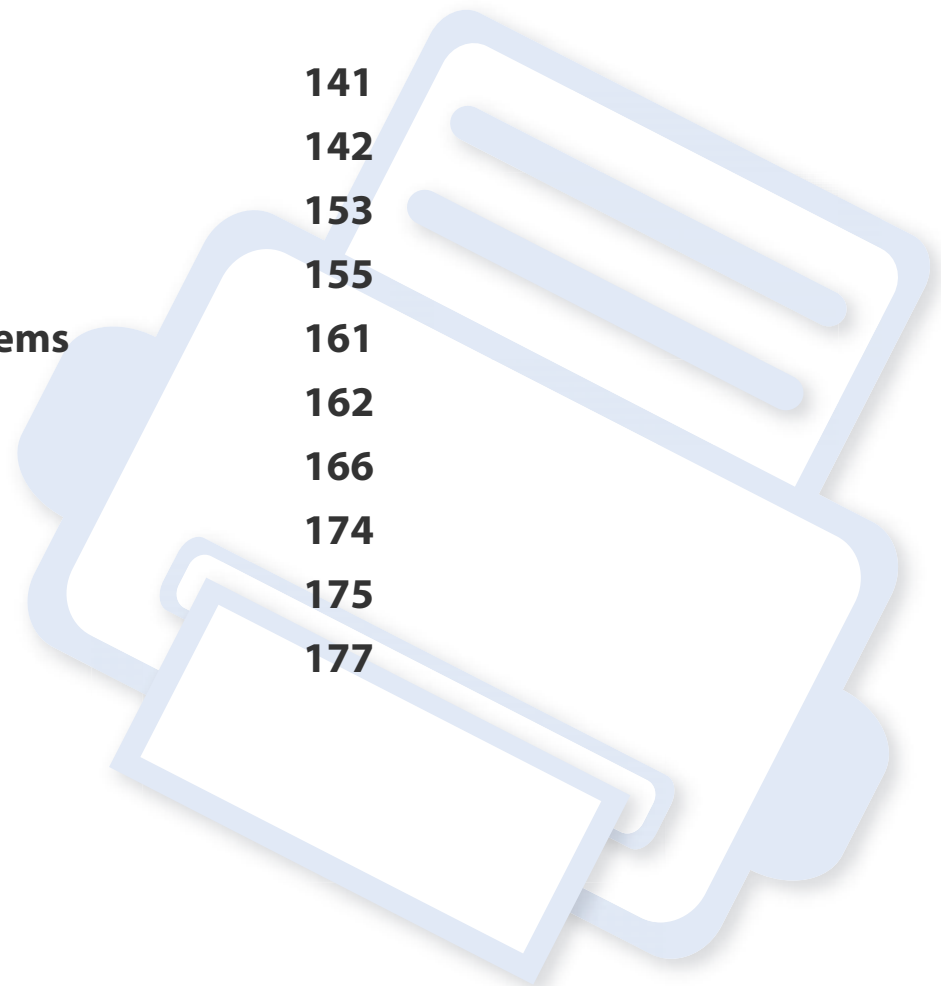
- **Printer Alert:** Provides settings related to when alerts will be received.
- **Email Alert:** Provides options relating to receiving alerts via email.
- **Alert History:** Provides a history of device and toner related alerts.



12. Troubleshooting

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

- **Paper feeding problems** 141
- **Clearing jams** 142
- **Understanding the status LED** 153
- **Understanding display messages** 155
- **Power and cable connecting problems** 161
- **Printing problems** 162
- **Printing quality problems** 166
- **Copying problems** 174
- **Scanning problems** 175
- **Operating system problems** 177



Paper feeding problems

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

Clearing jams



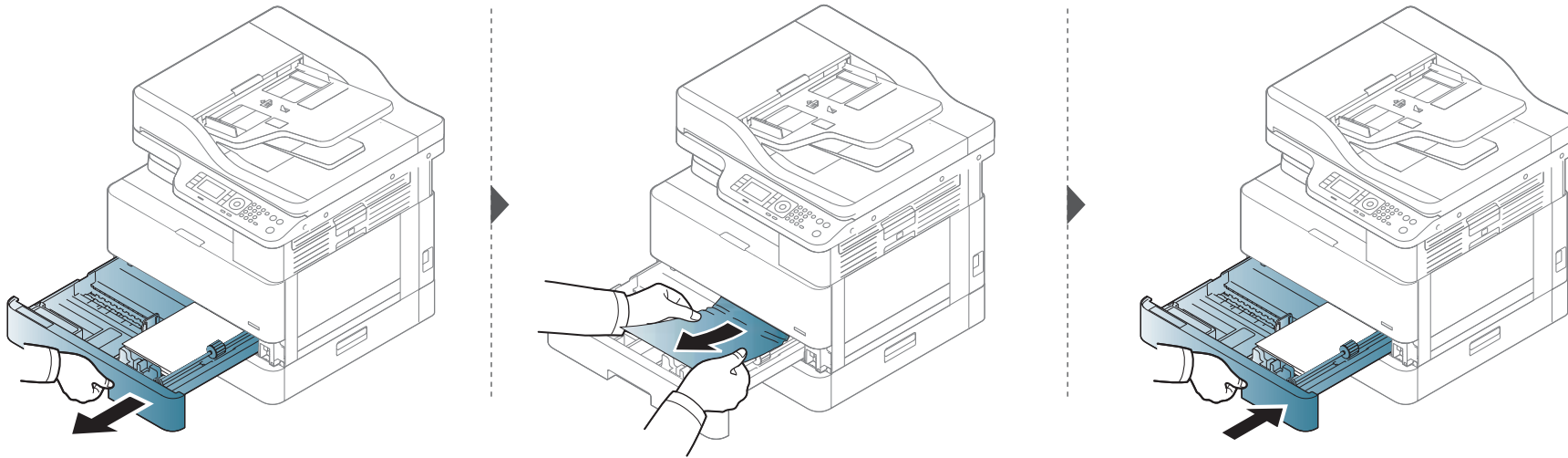
To avoid tearing the paper, pull the jammed paper out slowly and gently.

Illustrations on this user's guide may differ from your machine depending on its model or optional goods. Check your machine type (see "Front view" on page 16).

In tray1



Click this link to open an animation about clearing a jam.

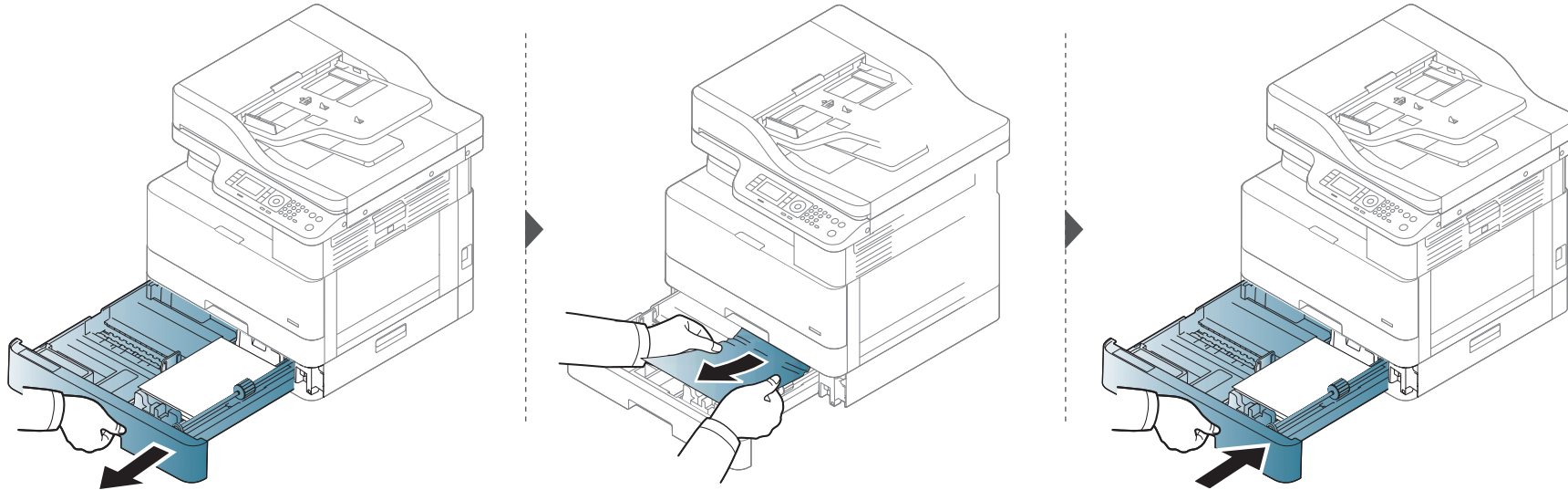


Clearing jams

In optional tray

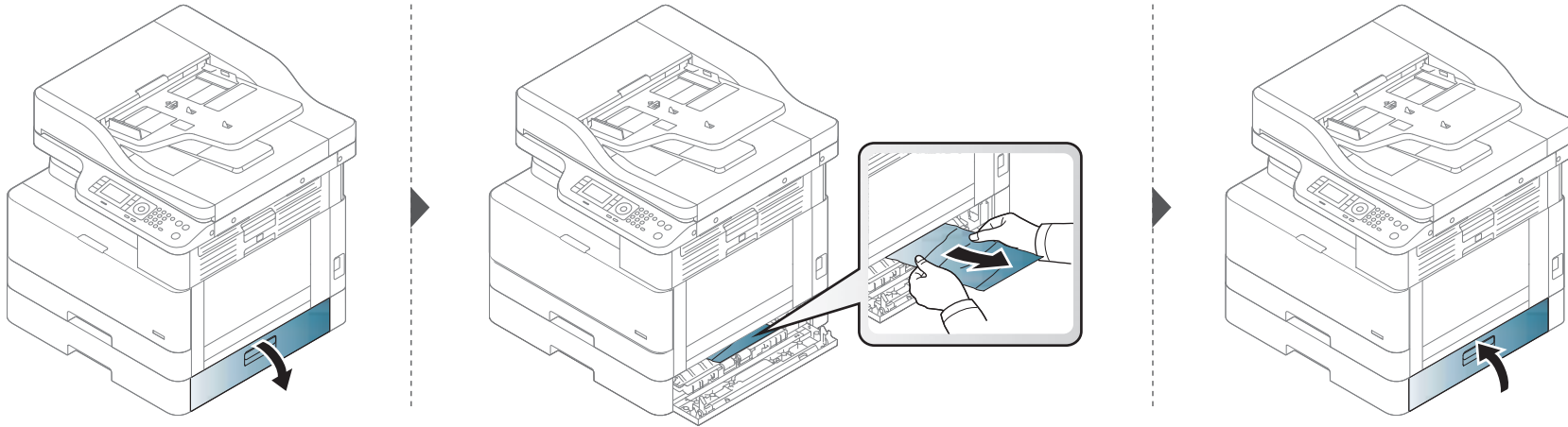


Click this link to open an animation about clearing a jam.



Clearing jams

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

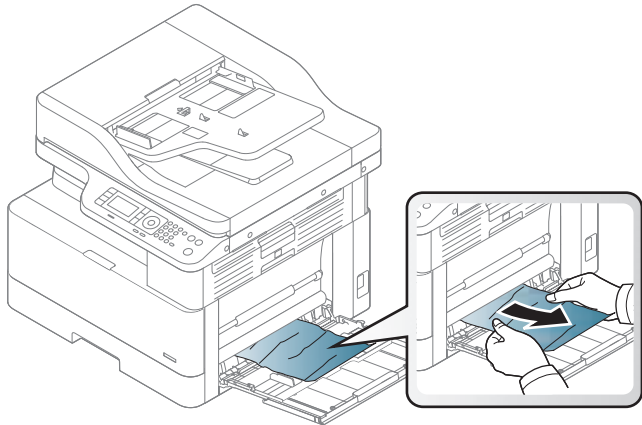


Clearing jams

In the multi-purpose tray



Click this link to open an animation about clearing a jam.



Clearing jams

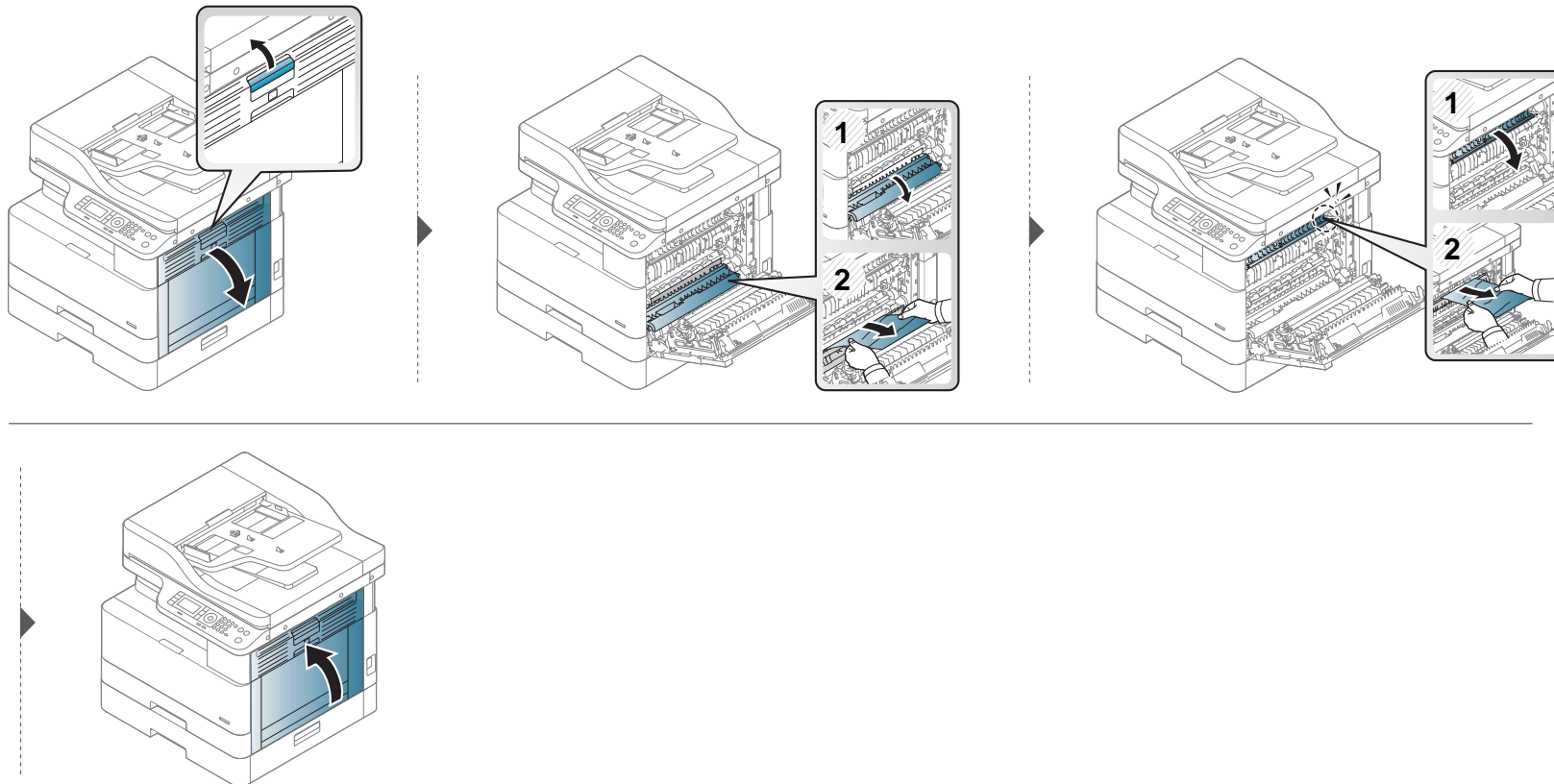
Inside the machine



The fuser area is hot. Take care when removing paper from the machine.



[Click this link to open an animation about clearing a jam.](#)



Clearing jams

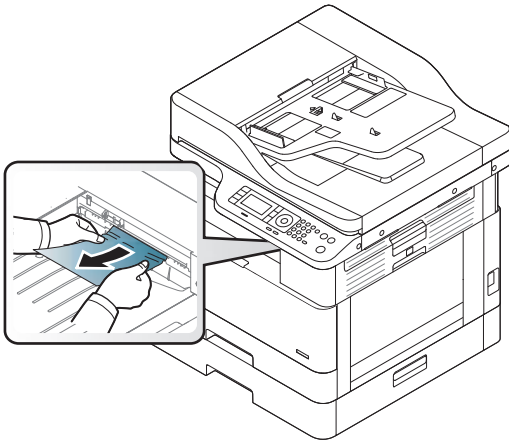
In the exit area



Click this link to open an animation about clearing a jam.

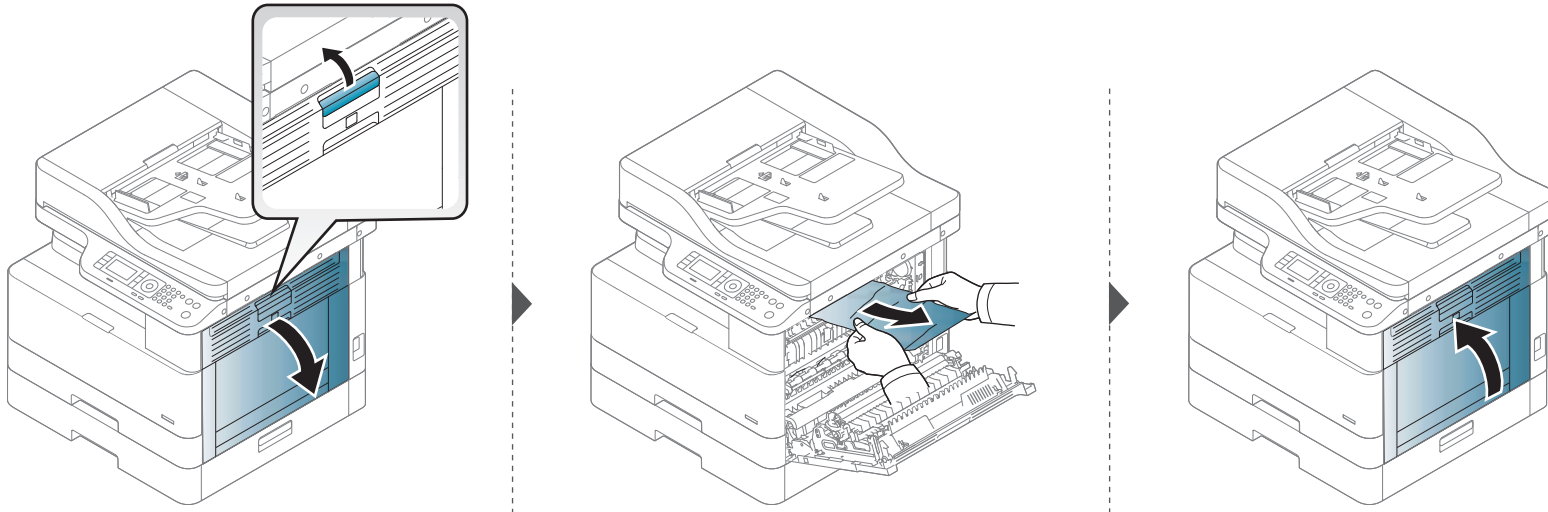


The fuser area is hot. Take care when removing paper from the machine.



Clearing jams

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

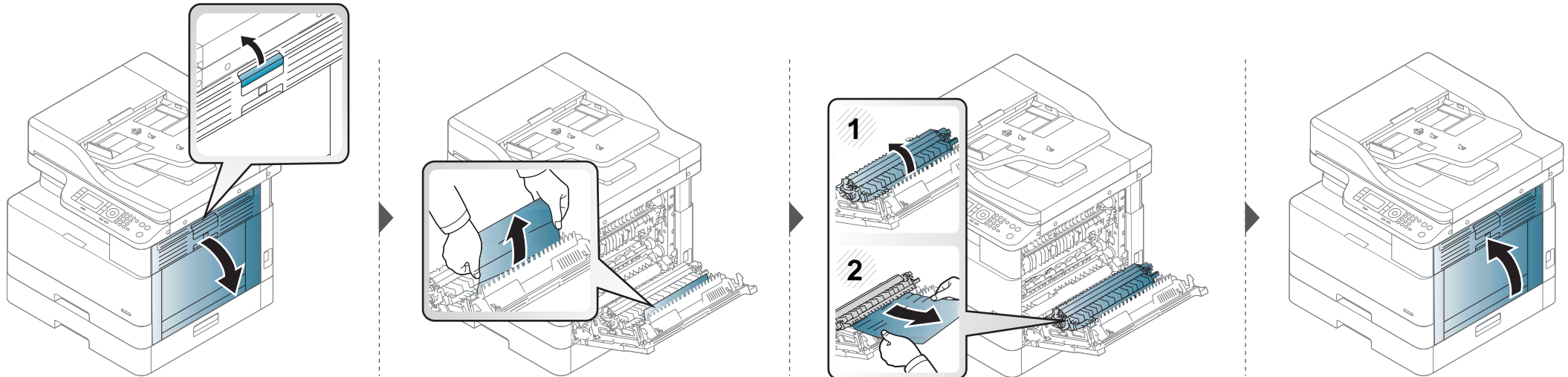


Clearing jams

In the duplex unit area





Click this link to open an animation about clearing a jam.



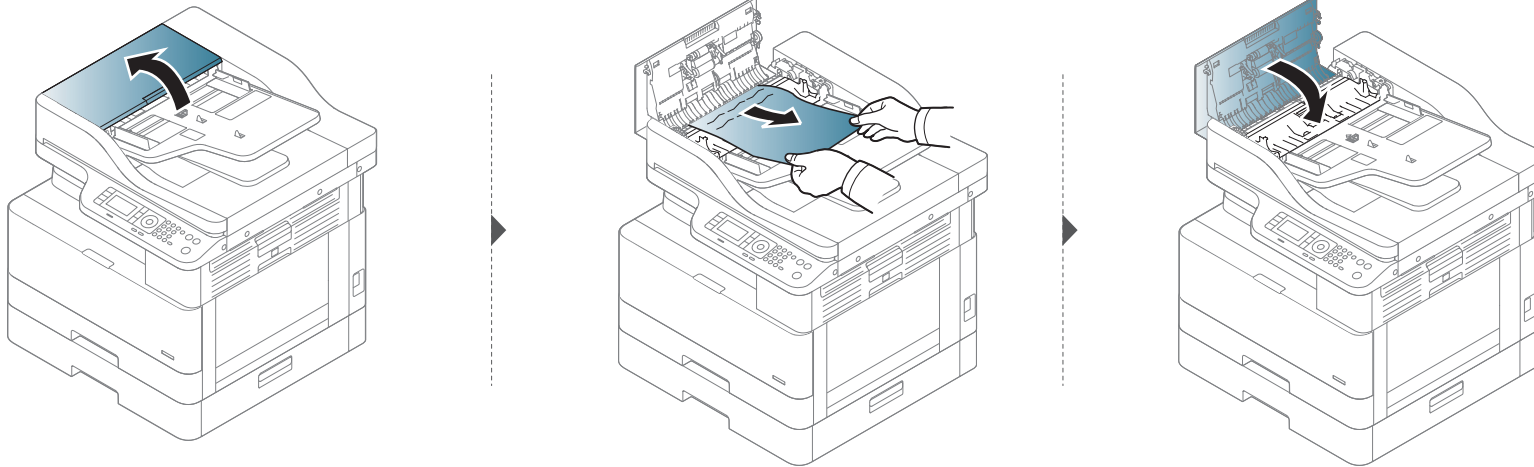
Clearing jams

Clearing original document jams

 To prevent document jams, use the scanner glass for thick, thin or mixed paper originals.

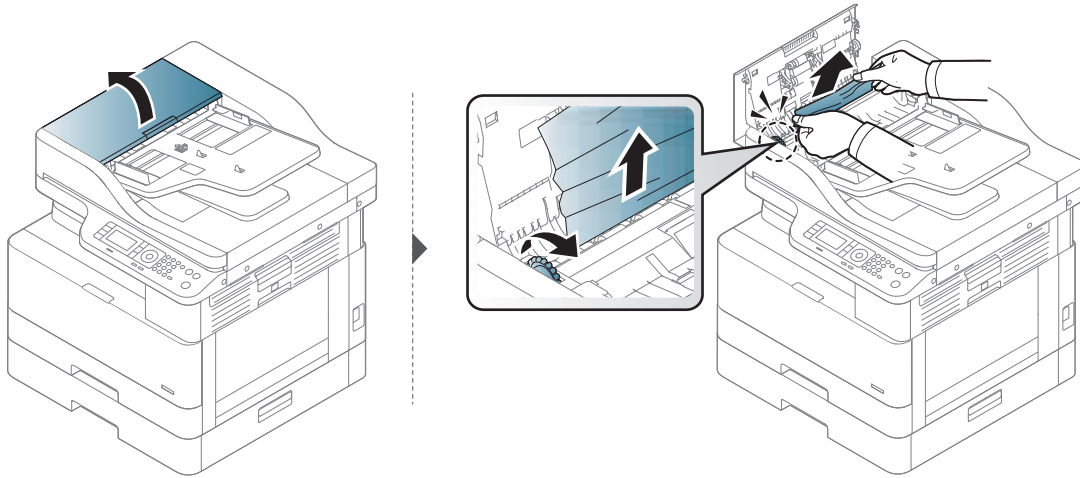
 To avoid tearing the document, remove the jammed document slowly and carefully.

Original paper jam in front of scanner

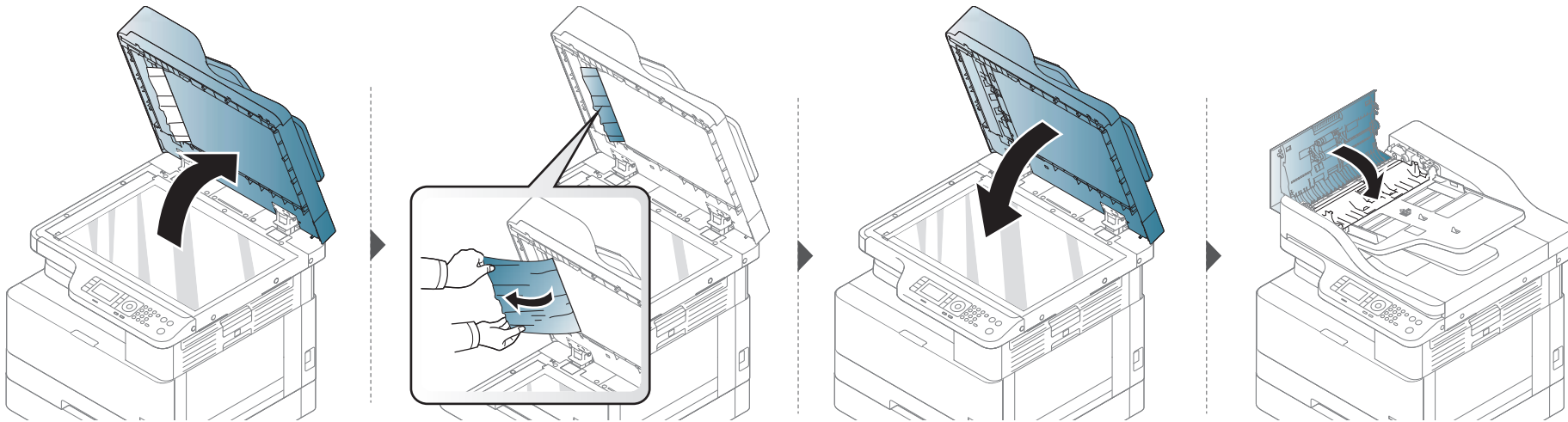


Clearing jams

Original paper jam inside of scanner

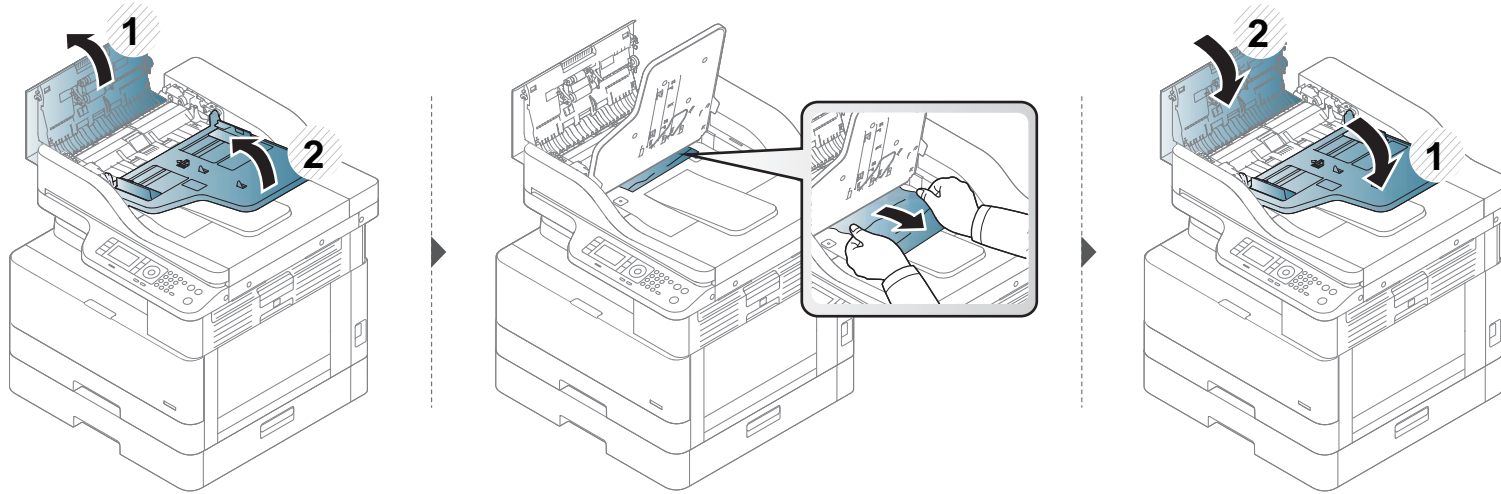


If you do not see the paper in this area, stop and go to next step:

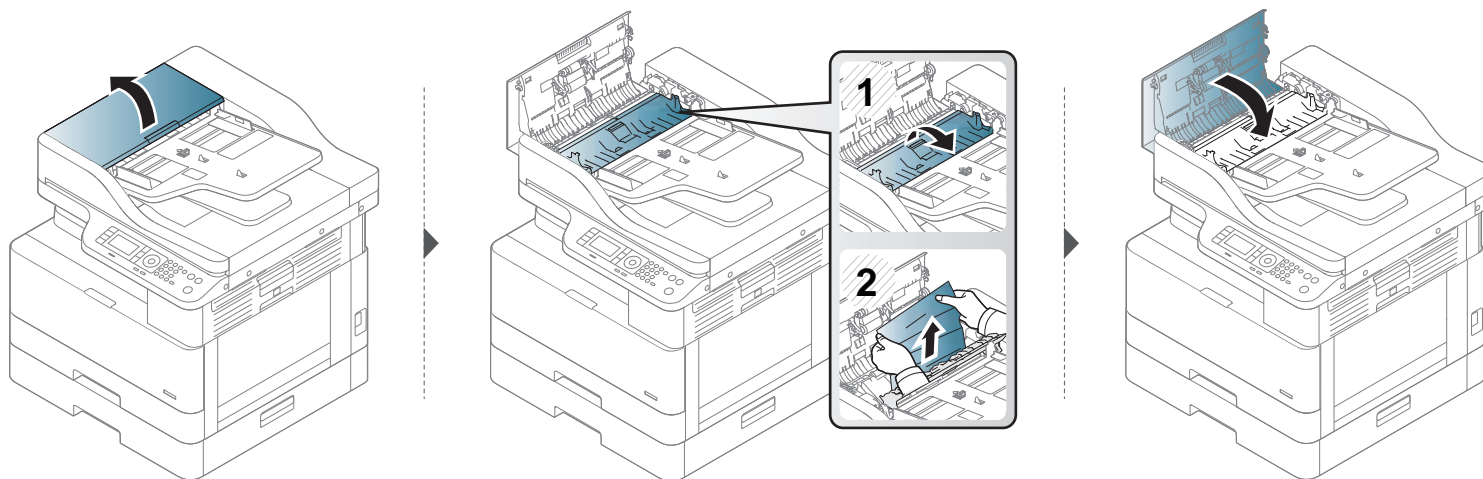


Clearing jams

Original paper jam in exit area of scanner



Original paper jam in scanner duplex path



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 18).
- To resolve the error, look at the error message and its instructions from the troubleshooting part (see "Understanding display messages" on page 155).
- You also can resolve the error with the guideline from the computer's Samsung Printing Status window.
- If the problem persists, call a service representative.

LED	Status	Description	
Status	Off	<ul style="list-style-type: none">• The machine is off-line.• The machine is in power save mode.	
	Green	Blinking	When the backlight blinks, the machine is receiving or printing data.
		On	<ul style="list-style-type: none">• The machine is on-line and can be used.
	Red	Blinking	<ul style="list-style-type: none">• 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.• Small amount of toner is left in the cartridge. The estimated cartridge life^a 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 116).^b
			On

Understanding the status LED

LED	Status	Description
 Power / Wake Up	Blue	On The machine is in power save mode.
		Off The machine is in ready mode or machine's power is off.

- 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 18).
- c. When the imaging unit has reached its end of life, the machine will stop printing. In this case, you can choose to stop or continue printing from the SyncThru™ Web Service (**Settings > Machine Settings > System > Setup > Supplies Management > Imaging Unit Stop**) or Samsung Easy Printer Manager (**Device Settings > System > Supplies Management > Imaging Unit Stop**). Turning off this option and continuing to print may damage the device's system.

Understanding display messages

Messages appear on the control panel display to indicate the machine's status or errors. Refer to the tables below to understand the messages' and their meaning, and correct the problem, if necessary.



- You can resolve the error with the guideline from the computer's Printing Status program window.
- If a message is not in the table, reboot the power and try the printing job again. If the problem persists, call a service representative.
- When you call for service, provide the service representative with the contents of display message.
- Some messages may not appear on the display depending on the model or optional goods
- [error number] indicates the error number.
- [tray type] indicates the tray number.
- [media type] indicates the media type.
- [media size] indicates the media size.
- [unit type] indicates the unit type.

Paper Jam-related messages

Message	Meaning	Suggested solutions
• Original paper jam	The loaded original document has jammed in document feeder.	Clear the jam (see "Clearing original document jams" on page 150).
• Paper Jam in tray 1	Paper has jammed in the tray.	Clear the jam (see "In tray1" on page 142).
• Paper Jam in tray 2	Paper has jammed in the optional tray.	Clear the jam (see "In optional tray" on page 143).
• Paper Jam in MP tray	Paper has jammed in the multi-purpose tray.	Clear the jam (see "In the multi-purpose tray" on page 145).
• Jam inside machine	Paper has jammed inside the machine.	Clear the jam (see "Inside the machine" on page 146).
• Jam inside of duplex	Paper has jammed inside the duplex.	Clear the jam (see "In the duplex unit area" on page 149).
• Jam in exit area	Paper has jammed in the paper exit area.	Clear the jam (see "In the exit area" on page 147).

Understanding display messages

Toner-related messages

Message	Meaning	Suggested solutions
<ul style="list-style-type: none"> • Error [error number] Toner Cart Failure: [error number] Call for service 	A toner cartridge is not installed.	Reinstall the toner cartridge.
<ul style="list-style-type: none"> • Error [error number] Toner Failure: [error number] Install toner again 	A toner cartridge is not being detected	Reinstall the toner cartridge two or three times to confirm it is seated properly. If the problem persists, contact the service representatives.
<ul style="list-style-type: none"> • Toner not installed Toner cartridge is not installed. Install it 	Protective film is not removed from toner.	Remove the protective film from the toner cartridge.
<ul style="list-style-type: none"> • IMG. Not Compatible Imaging unit is not compatible. Check guide 	The imaging unit you have installed is not for your machine.	Install a Samsung-genuine imaging unit, designed for your machine.

Message	Meaning	Suggested solutions
<ul style="list-style-type: none"> • IMG. Not Installed Imaging unit is not installed. Install the unit. 	The imaging unit is not installed.	Reinstall the imaging unit two or three times. If the problem persists, call for service.
<ul style="list-style-type: none"> • Prepare IMG. unit Prepare new imaging unit 	The estimated imaging unit life is close.	Prepare a new imaging unit for replacement (see "Available consumables" on page 111).
<ul style="list-style-type: none"> • Replace IMG. unit Replace with new imaging unit 	The indicated imaging unit has almost reached its estimated imaging unit life.	<ul style="list-style-type: none"> • You can choose Stop or Continue as shown on the control panel. If you select Stop, the printer stops printing and you cannot print any more without changing the imaging unit. If you select Continue, the printer keeps printing but the printing quality cannot be guaranteed. • Replace the imaging unit for the best print quality when this message appears. Using a imaging unit beyond this stage can result in printing quality issues (see "Replacing the imaging unit" on page 120). • If the machine stops printing, replace the imaging unit (see "Replacing the imaging unit" on page 120).

Understanding display messages

Message	Meaning	Suggested solutions
<ul style="list-style-type: none"> • Toner Not compatible Toner cartridge is not compatible. Check guide 	The indicated toner cartridge is not suitable for your machine.	Install the corresponding toner cartridge with a Samsung-genuine cartridge (see "Replacing the toner cartridge" on page 118).
<ul style="list-style-type: none"> • Prepare new toner Prepare new toner cartridge 	Small amount of toner is left in the indicated cartridge. The estimated cartridge life ^a of toner is close.	Prepare a new cartridge for a replacement. You may temporarily increase the printing quality by redistributing the toner (see "Redistributing toner" on page 116).

Message	Meaning	Suggested solutions
<ul style="list-style-type: none"> • Replace new toner Replace with new toner cartridge 	The indicated toner cartridge has almost reached its estimated cartridge life.	<ul style="list-style-type: none"> • You can choose Stop or Continue as shown on the control panel. If you select Stop, the printer stops printing. If you select Continue, the printer keeps printing but the printing quality cannot be guaranteed. • Replace the toner cartridge for the best print quality when this message appears. Using a cartridge beyond this stage can result in printing quality issues (see "Replacing the toner cartridge" on page 118).
	The indicated toner cartridge has reached its estimated cartridge life	Replace the toner cartridge (see "Replacing the toner cartridge" on page 118).

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

Understanding display messages



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

Tray-related messages

Message	Meaning	Suggested solutions
<ul style="list-style-type: none">• All Tray Empty Paper is empty in all tray. Load paper	There is no paper in all tray.	Load paper in tray (see "Tray 1 / optional tray" on page 30).
<ul style="list-style-type: none">• Paper Empty in tray 1 Paper is empty in tray 1. Load paper• Paper Empty in tray 2 Paper is empty in tray 2. Load paper	There is no paper in tray.	Load paper in tray (see "Tray 1 / optional tray" on page 30).
<ul style="list-style-type: none">• Paper Empty in MP Paper is empty in MP tray. Load paper	There is no paper in the multi-purpose tray.	Load paper in the multi-purpose tray (see "Multi-purpose tray" on page 32).

Message	Meaning	Suggested solutions
<ul style="list-style-type: none">• Tray 2 door is open. Close it	The tray2 is notsecurely latched.	Close the tray2 until it locks into place.

Network-related messages

Message	Meaning	Suggested solutions
<ul style="list-style-type: none">• IP Conflict This IP address conflicts with that of other system	The network IP address you have set is being used by someone else.	Check the IP address and reset it if necessary (see "Printing a network configuration report" on page 52).

Understanding display messages

Misc. messages

Message	Meaning	Suggested solutions
<ul style="list-style-type: none"> • Door is open. Close it 	The front cover or rear cover is not securely latched.	Close the cover until it locks into place.
<ul style="list-style-type: none"> • Scanner door open Door of scanner is open. Close the door 	The document feeder cover is not securely latched.	Close the cover until it locks into place.
<ul style="list-style-type: none"> • Not Proper room temp Not Proper room temperature. Change room temperature 	The machine is in a room with improper room temperature.	Move the machine to a room with proper room temperature (see "Specifications" on page 179).
<ul style="list-style-type: none"> • Replace reverse roller Replace with new tray 1 reverse roller • Replace reverse roller Replace with new tray 2 reverse roller 	The life of the tray reverse roller has expired.	Replace the tray reverse roller with a new one. Contact the service representatives.
<ul style="list-style-type: none"> • Replace pickup roller Replace with new tray 2 pickup roller 	The life of the tray pickup roller will be expired.	Replace the tray pickup roller with a new one. Contact the service representatives.

Message	Meaning	Suggested solutions
<ul style="list-style-type: none"> • Replace pickup roller Replace with new [tray type] pickup roller 	The life of the tray1, tray2 or MP tray pick-up roller will expired soon.	Replace the tray pick-up roller with a new one. Contact the service representatives.
<ul style="list-style-type: none"> • Scanner Locked Scanner is locked. Press Stop button 	The scanner is locked.	Reboot the power. If the problem persists, please call for service.
<ul style="list-style-type: none"> • Scanner door open Door of scanner is open. Close the door 	The document feeder cover is not securely latched.	Close the cover until it locks into place.
<ul style="list-style-type: none"> • Error: [error number] Fuser Unit Failure: [error number] Turn off then on. Call for service if the problem 	There is a problem in the fuser unit.	Reboot the power. If the problem persists, please call for service.
<ul style="list-style-type: none"> • Error: [error number] Motor Failure: [error number] Turn off then on. Call for service if the problem 	There is a problem in the Motor system.	Reboot the power. If the problem persists, please call for service.

Understanding display messages


Message	Meaning	Suggested solutions
<ul style="list-style-type: none">• Error: [error number] LSU Failure: [error number] Turn off then on. Call for service if the problem	There is a problem in the LSU.	Reboot the power. If the problem persists, please call for service.
<ul style="list-style-type: none">• Error: [error number] Input System Failure: [error number] Check tray 2 connection	There is a problem in the tray 2.	Check the tray2 connection.
<ul style="list-style-type: none">• Error: [error number] Video System Failure: [error number] Call for service if the problem persists	There is a problem in the video system.	Reboot the power. If the problem persists, please call for service.

Power and cable connecting problems


Power



Click this link to open an animation about solving power problems.

Condition	Suggested solutions
The machine is not receiving power, or the connection cable between the computer and the machine is not connected properly.	<ul style="list-style-type: none">• Connect the machine to the electricity supply first. If the machine has a  (Power / Wake Up) button on the control, press it.• Disconnect the machine's cable and reconnect it.


Printing problems

Condition	Possible cause	Suggested solutions
The machine does not print.	The machine is not receiving power.	Connect the machine to the electricity supply first. If the machine has a  (Power / Wake Up) 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">• The cover is not closed. Close the cover.• Paper is jammed. Clear the paper jam (see "Clearing jams" on page 142).• No paper is loaded. Load paper (see "Loading paper in the tray" on page 30).• The toner cartridge is not installed. Install the toner cartridge (see "Replacing the toner cartridge" on page 118).• Make sure the protect cover and sheets are removed from the toner cartridge (see "Replacing the toner cartridge" on page 118). 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 17).
	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
The machine does not print.	The machine may be configured incorrectly.	Check the Printing Preferences 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.
The machine selects print materials from the wrong paper source.	The paper option that was selected in the Printing Preferences may be incorrect.	For many software applications, the paper source selection is found under the Paper tab within the Printing Preferences (see "Opening printing preferences" on page 61). Select the correct paper source. See the printer driver help screen (see "Using help" on page 62).
A print job is extremely slow.	The job may be very complex.	Reduce the complexity of the page or try adjusting the print quality settings.
Half the page is blank.	The page orientation setting may be incorrect.	Change the page orientation in your application (see "Opening printing preferences" on page 61). See the printer driver help screen (see "Using help" on page 62).
	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 61).
The machine prints, but the text is wrong, garbled, or incomplete.	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

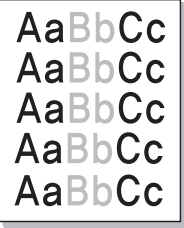
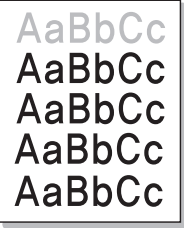
Condition	Possible cause	Suggested solutions
	The wrong printer driver was selected.	Check the application's printer selection menu to ensure that your machine is selected.
	The software application is malfunctioning.	Try printing a job from another application.
	The operating system is malfunctioning.	Exit Windows and reboot the computer. Turn the machine off and back on again.
Pages print, but they are blank.	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">• See "Redistributing toner" on page 116.• See "Replacing the toner cartridge" on page 118.
	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.
The machine does not print PDF files correctly. Some parts of graphics, text, or illustrations are missing.	Incompatibility between the PDF file and the Acrobat products.	Printing the PDF file as an image may enable the file to print. Turn on Print As Image from the Acrobat printing options.  It will take longer to print when you print a PDF file as an image.
The print quality of photos is not good. Images are not clear.	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.
Before printing, the machine emits vapor near the output tray.	Using damp/wet paper can cause vapor [white smoke] during printing.	This is not a problem, just keep printing. If you are bothered by the smoke [vapor], then replace the paper with fresh paper from an unopened ream.

Printing problems

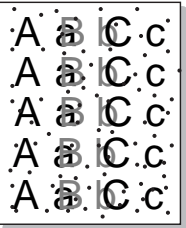
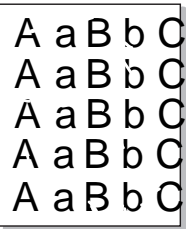
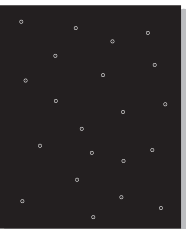
Condition	Possible cause	Suggested solutions
The machine does not print special-sized paper, such as billing paper.	Paper size and paper size setting do not match.	Set the correct paper size in the Custom in Paper tab in Printing Preferences (see "Opening printing preferences" on page 61).
The printed billing paper is curled.	The paper type setting does not match.	Change the printer option and try again. Go to Printing Preferences , click Paper tab, and set type to Thin (see "Opening printing preferences" on page 61).

Printing quality problems

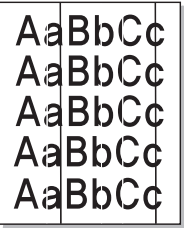
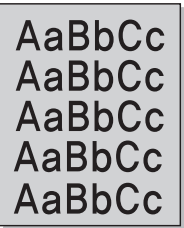
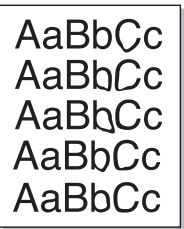
If the inside of the machine is dirty or paper has been loaded improperly, there might be a reduction in print quality. See the table below to clear the problem.

Condition	Suggested solutions
<p data-bbox="51 359 322 389">Light or faded print</p> 	<ul data-bbox="506 359 2190 751" style="list-style-type: none">• 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 118).• The paper may not meet paper specifications; for example, the paper may be too moist or rough.• 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.• 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 125).• The surface of the LSU part inside the machine may be dirty. Clean the inside of your machine (see "Cleaning the machine" on page 125). If these steps do not correct the problem, contact a service representative.
<p data-bbox="51 788 472 903">The top half of the paper is printed lighter than the rest of the paper</p> 	<p data-bbox="506 788 1301 818">The toner might not adhere properly to this type of paper.</p> <ul data-bbox="506 842 2190 911" style="list-style-type: none">• Change the printer option and try again. Go to Printing Preferences, click the Paper tab, and set the paper type to Recycled (see "Opening printing preferences" on page 61).

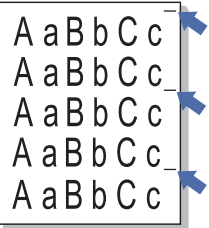
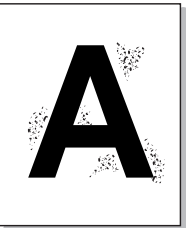
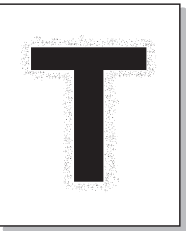
Printing quality problems

Condition	Suggested solutions
<p>Toner specks</p> 	<ul style="list-style-type: none">• The paper may not meet specifications; for example, the paper may be too moist or rough.• The transfer roller may be dirty. Clean the inside of your machine (see "Cleaning the machine" on page 125).• The paper path may need cleaning. If these steps do not correct the problem, contact a service representative.(see "Cleaning the machine" on page 125).
<p>Dropouts</p> 	<p>If faded areas, generally rounded, occur randomly on the page:</p> <ul style="list-style-type: none">• A single sheet of paper may be defective. Try reprinting the job.• The moisture content of the paper is uneven or the paper has moist spots on its surface. Try a different brand of paper.• The paper lot is bad. The manufacturing processes can cause some areas to reject toner. Try a different kind or brand of paper.• Change the printer option and try again. Go to Printing Preferences, click the Paper tab, and set type to Thick (see "Opening printing preferences" on page 61). <p>If these steps do not correct the problem, contact a service representative.</p>
<p>White Spots</p> 	<p>If white spots appear on the page:</p> <ul style="list-style-type: none">• 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 125).• The paper path may need cleaning. Clean the inside of your machine (see "Cleaning the machine" on page 125). <p>If these steps do not correct the problem, contact a service representative.</p>

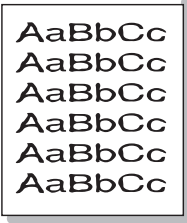
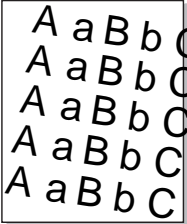
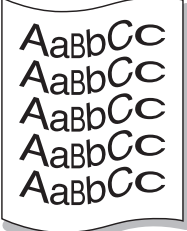
Printing quality problems

Condition	Suggested solutions
Vertical lines 	<p>If black vertical streaks appear on the page:</p> <ul style="list-style-type: none">• The surface (drum part) of the cartridge inside the machine has probably been scratched. Remove the cartridge and install a new one (see "Replacing the toner cartridge" on page 118 , "Replacing the imaging unit" on page 120). <p>If white vertical streaks appear on the page:</p> <ul style="list-style-type: none">• The surface of the LSU part inside the machine may be dirty. Clean the inside of your machine (see "Cleaning the machine" on page 125). If these steps do not correct the problem, contact a service representative.
Black or color background 	<p>If the amount of background shading becomes unacceptable:</p> <ul style="list-style-type: none">• Change to a lighter weight paper.• Check the environmental conditions: very dry conditions or a high level of humidity (higher than 80% RH) can increase the amount of background shading.• Remove the old toner cartridge and install a new one (see "Replacing the toner cartridge" on page 118).• Thoroughly redistribute the toner (see "Redistributing toner" on page 116).
Toner smear 	<ul style="list-style-type: none">• Clean the inside of the machine (see "Cleaning the machine" on page 125).• Check the paper type and quality.• Remove the toner cartridge and install a new one (see "Replacing the toner cartridge" on page 118).

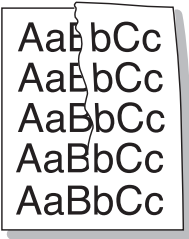
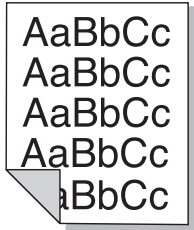
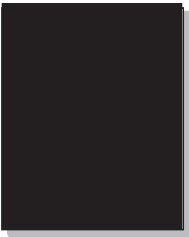
Printing quality problems

Condition	Suggested solutions
<p data-bbox="51 272 405 304">Vertical repetitive defects</p> 	<p data-bbox="506 272 1473 304">If marks repeatedly appear on the printed side of the page at even intervals:</p> <ul data-bbox="506 328 2190 544" style="list-style-type: none"><li data-bbox="506 328 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 118).<li data-bbox="506 416 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 data-bbox="506 504 1464 544">• The fusing assembly may be damaged. Contact a service representative.
<p data-bbox="51 612 322 644">Background scatter</p> 	<p data-bbox="506 612 1621 644">Background scatter results from bits of toner randomly distributed on the printed page.</p> <ul data-bbox="506 668 2190 1059" style="list-style-type: none"><li data-bbox="506 668 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 data-bbox="506 756 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 Thick from the Printing Preferences window (see "Opening printing preferences" on page 61).<li data-bbox="506 892 2190 1011">• If background scatter covers the entire surface area of a printed page, adjust the print resolution through your software application or in Printing Preferences (see "Opening printing preferences" on page 61). 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 data-bbox="506 1027 1890 1059">• If you are using a new toner cartridge, redistribute the toner first (see "Redistributing toner" on page 116).
<p data-bbox="51 1091 479 1163">Toner particles are around bold characters or pictures</p> 	<p data-bbox="506 1091 1249 1123">The toner might not adhere properly to this type of paper.</p> <ul data-bbox="506 1147 2190 1315" style="list-style-type: none"><li data-bbox="506 1147 2190 1219">• Change the printer option and try again. Go to Printing Preferences, click the Paper tab, and set the paper type to Recycled (see "Opening printing preferences" on page 61).<li data-bbox="506 1235 2190 1315">• 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.

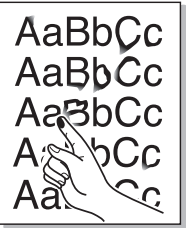

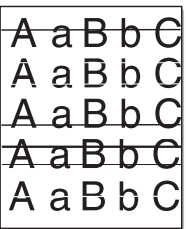
Printing quality problems

Condition	Suggested solutions
<p data-bbox="49 272 353 304">Misformed characters</p> 	<ul data-bbox="504 272 2072 304" style="list-style-type: none">• If characters are improperly formed and producing hollow images, the paper stock may be too slick. Try different paper.
<p data-bbox="49 608 203 639">Page skew</p> 	<ul data-bbox="504 608 1518 743" style="list-style-type: none">• Ensure that the paper is loaded properly.• Check the paper type and quality.• Ensure that the guides are not too tight or too loose against the paper stack.
<p data-bbox="49 951 226 983">Curl or wave</p> 	<ul data-bbox="504 951 1729 1086" style="list-style-type: none">• Ensure that the paper is loaded properly.• Check the paper type and quality. Both high temperature and humidity can cause paper curl.• Turn the stack of paper over in the tray. Also try rotating the paper 180° in the tray.

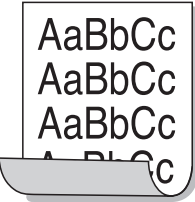
Printing quality problems

Condition	Suggested solutions
<p data-bbox="49 272 318 304">Wrinkles or creases</p> 	<ul data-bbox="504 272 1594 411" style="list-style-type: none">• Ensure that the paper is loaded properly.• Check the paper type and quality.• Turn the stack of paper over in the tray. Also try rotating the paper 180° in the tray.
<p data-bbox="49 619 412 651">Back of printouts are dirty</p> 	<ul data-bbox="504 619 1805 651" style="list-style-type: none">• Check for leaking toner. Clean the inside of the machine (see "Cleaning the machine" on page 125).
<p data-bbox="49 986 405 1018">Solid color or black pages</p> 	<ul data-bbox="504 986 2159 1161" style="list-style-type: none">• The toner cartridge may not be installed properly. Remove the cartridge and reinsert it.• The toner cartridge may be defective. Remove the toner cartridge and install a new one (see "Replacing the toner cartridge" on page 118).• The machine may require repairing. Contact a service representative.

Printing quality problems

Condition	Suggested solutions
<p>Loose toner</p>  <p>The image shows a printed page with the text 'AaBbCc' repeated five times. A hand is pointing to the second 'C' in the second line, where there is a noticeable smudge or excess toner.</p>	<ul style="list-style-type: none">• Clean the inside of the machine (see "Cleaning the machine" on page 125).• Check the paper type, thickness, and quality.• Remove the toner cartridge and then, install a new one (see "Replacing the toner cartridge" on page 118). <p>If the problem persists, the machine may require repair. Contact a service representative.</p>
<p>Character voids</p>  <p>The image shows a large printed letter 'A'. There are white, irregular shapes inside the letter, representing voids where the toner did not reach.</p>	<p>Character voids are white areas within parts of characters that should be solid black:</p> <ul style="list-style-type: none">• You may be printing on the wrong surface of the paper. Remove the paper and turn it around.• The paper may not meet paper specifications.
<p>Horizontal stripes</p>  <p>The image shows a printed page with the text 'A a B b C' repeated five times. There are horizontal black stripes or smears across the text, particularly on the 'A' and 'C' characters.</p>	<p>If horizontally aligned black streaks or smears appear:</p> <ul style="list-style-type: none">• The toner cartridge may be installed improperly. Remove the cartridge and reinsert it.• The toner cartridge may be defective. Remove the toner cartridge and install a new one (see "Replacing the toner cartridge" on page 118). <p>If the problem persists, the machine may require repairing. Contact a service representative.</p>

Printing quality problems

Condition	Suggested solutions
<p>Curl</p> 	<p>If the printed paper is curled or paper does not feed into the machine:</p> <ul style="list-style-type: none">• Turn the stack of paper over in the tray. Also try rotating the paper 180° in the tray.• Change the printer's paper option and try again. Go to Printing Preferences, click the Paper tab, and set type to Thin (see "Opening printing preferences" on page 61).
<ul style="list-style-type: none">• An unknown image repetitively appears on a few sheets• Loose toner• Light print or contamination occurs	<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 135).</p>

Copying problems

Condition	Suggested solutions
Copies are too light or too dark.	Adjust the darkness in copy feature to lighten or darken the backgrounds of copies (see "Changing the settings for each copy" on page 85).
Smears, lines, marks, or spots appear on copies.	<ul style="list-style-type: none">• If the defects are on the original, adjust darkness in copy feature to lighten the background of your copies.• If there are no defects on the original, clean the scan unit (see "Cleaning the scan unit" on page 129).
Copy image is skewed.	<ul style="list-style-type: none">• Ensure that the original is aligned with the registration guide.• The transfer roller may be dirty. Clean the inside of your machine (see "Cleaning the machine" on page 125).
Blank copies print out.	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.
Image rubs off the copy easily.	<ul style="list-style-type: none">• Replace the paper in the tray with paper from a new package.• In high humidity areas, do not leave paper in the machine for extended periods of time.
Frequent copy paper jams occur.	<ul style="list-style-type: none">• 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.• Ensure that the paper is the proper type and weight (see "Print media specifications" on page 41).• Check for copy paper or pieces of copy paper remaining in the machine after a paper jam has been cleared.
Toner cartridge produces fewer copies than expected before running out of toner.	<ul style="list-style-type: none">• 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.• The scanner lid may be left open while copies are being made.• Turn the machine off and back on.

Scanning problems

Condition	Suggested solutions
The scanner does not work.	<ul style="list-style-type: none">• 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 37).• 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.• Check that the machine printer cable is connected properly.• 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.• Check that the scanner is configured correctly. Check scan setting in the application you want to use to make certain that the scanner job is being sent to the correct port (for example, USB001).
The unit scans very slowly.	<ul style="list-style-type: none">• Check if the machine is printing received data. If so, scan the document after the received data has been printed.• Graphics are scanned more slowly than text.• 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.

Scanning problems

Condition	Suggested solutions
<p>Message appears on your computer screen:</p> <ul style="list-style-type: none">• Device can't be set to the H/W mode you want.• Port is being used by another program.• Port is disabled.• Scanner is busy receiving or printing data. When the current job is completed, try again.• Invalid handle.• Scanning has failed.	<ul style="list-style-type: none">• There may be a copying or printing job in progress. Try your job again when that job is finished.• The selected port is currently being used. Restart your computer and try again.• The machine printer cable may be improperly connected or the power may be off.• The scanner driver is not installed or the operating environment is not set up properly.• Ensure that the machine is properly connected and the power is on, then restart your computer.• The USB cable may be improperly connected or the power may be off.

Operating system problems

Common Windows problems

Condition	Suggested solutions
“File in Use” message appears during installation.	Exit all software applications. Remove all software from the startup group, then restart Windows. Reinstall the printer driver.
“General Protection Fault”, “Exception OE”, “Spool 32”, or “Illegal Operation” messages appear.	Close all other applications, reboot Windows and try printing again.
“Fail To Print”, “A printer timeout error occurred” message appear.	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.
Samsung Printer Experience is not shown when you click more settings.	Samsung Printer Experience is not installed. Download the app from the Windows Store and install it.
Machine information is not displayed when you click the device in the Devices and Printers.	Check the Printer properties . Click the Ports tab. (Control Panel > Devices and Printers > Right-click on your printer icon and select Printer properties) If the port is set to File or LPT, uncheck them and select TCP/IP, USB, or WSD.



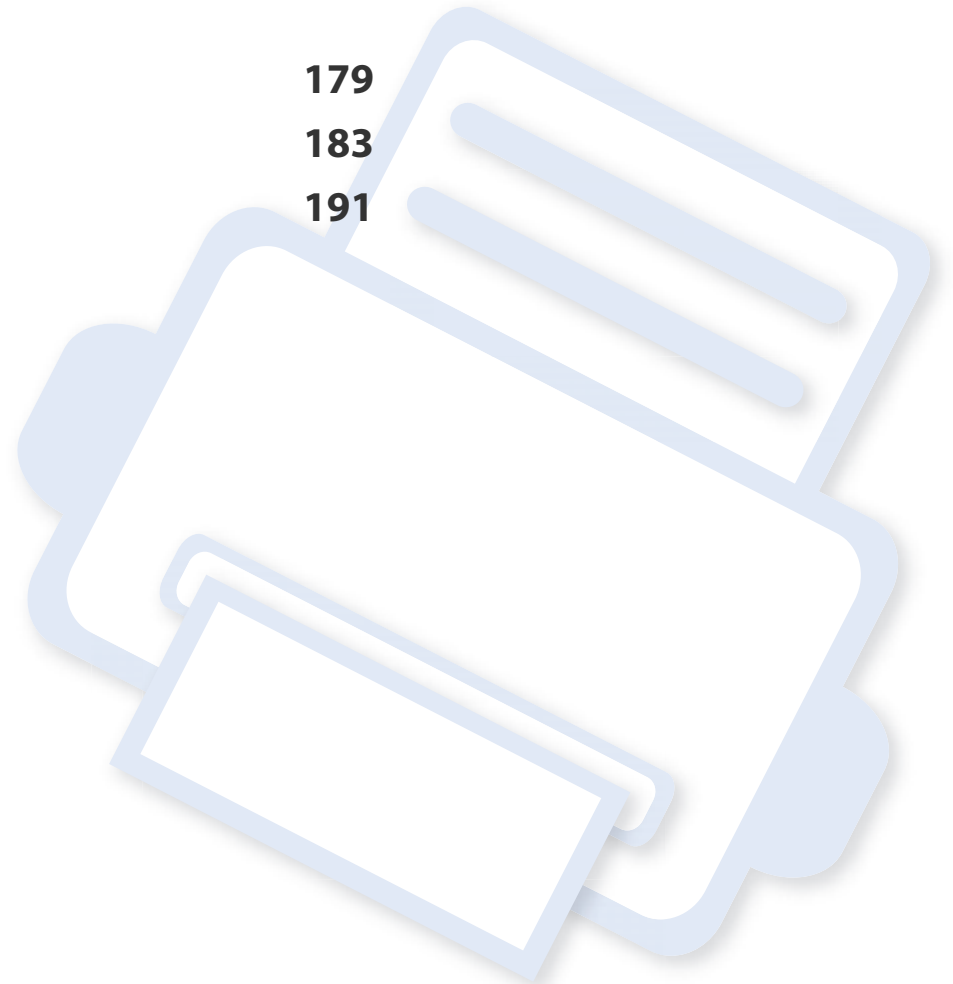
Refer to the Microsoft Windows User’s Guide that came with your computer for further information on Windows error messages.



13. Appendix

This chapter provides product specifications and information concerning applicable regulations.

- **Specifications** 179
- **Regulatory information** 183
- **Copyright** 191



Specifications

General specifications



The specification values listed below are subject to change without notice. See www.samsung.com for possible changes in information.

Items		Description	
Dimension^a	Width x Length x Height	560 x 540 x 417 mm (22.05 x 21.26 x 16.42 inches)	
Weight^a	Machine with consumables	<ul style="list-style-type: none"> • K220x Series : 25 kg (55.12 lbs) • K220xND Series : 25.45 kg (56.11 lbs) 	
Noise Level^b	Ready mode	Less than 30 dB (A)	
	Print mode	Less than 49 dB (A)	
	Copy/ Scan mode	Scanner glass	Less than 49 dB (A)
		Document feeder	Less than 53 dB (A)
Temperature	Operation	10 to 30°C (50 to 86 °F)	
	Storage (packed)	-20 to 40°C (-4 to 104 °F)	
Humidity	Operation	20 to 80% RH	
	Storage (packed)	10 to 90% RH	
Power rating^c	220 volt models	AC 220 - 240 V	

Specifications

	Items	Description
Power consumption	Average operating mode	Less than 500 W
	Ready mode	Less than 60 W
	Power save mode^d	Less than 1 W
	Power off mode^e	Less than 0.1 W

a. Dimensions and weight are measured without a handset and other accessories.

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

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

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

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

Specifications

System requirements

Microsoft® Windows®

Operating system	Requirement (recommended)		
	CPU	RAM	free HDD space
Windows® XP	Intel® Pentium® III 933 MHz (Pentium IV 1 GHz)	128 MB (256 MB)	1.5 GB
Windows Server® 2003	Intel® Pentium® III 933 MHz (Pentium IV 1 GHz)	128 MB (512 MB)	1.25 GB to 2 GB
Windows Server® 2008	Intel® Pentium® IV 1 GHz (Pentium IV 2 GHz)	512 MB (2 GB)	10 GB
Windows Vista®	Intel® Pentium® IV 3 GHz	512 MB (1 GB)	15 GB
Windows® 7	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">• Support for DirectX® 9 graphics with 128 MB memory (to enable the Aero theme).• DVD-R/W Drive		
Windows Server® 2008 R2	Intel® Pentium® IV 1 GHz (x86) or 1.4 GHz (x64) processors (2 GHz or faster)	512 MB (2 GB)	10 GB
Windows® 8	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">• Support for DirectX® 9 graphics with 128 MB memory (to enable the Aero theme).• DVD-R/W Drive		



- 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.

Specifications

Network environment (K220xND series only)



Network models only (see "Features by model" 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
Network interface	<ul style="list-style-type: none">Ethernet 10/100 Base-TX Wired Lan
Network operating system	Windows® XP, Windows Server® 2003, Windows Vista®, Windows® 7, Windows® 8, Windows Server® 2008 R2
Network protocols	<ul style="list-style-type: none">TCP/IPv4DHCP, BOOTPDNS, WINS, Bonjour, SLP, UPnPStandard TCP/IP Printing (RAW), LPR, IPP, WSDSNMPv 1/2/3, HTTP, IPsecTCP/IPv6 (DHCP, DNS, RAW, LPR, SNMPv 1/2/3, HTTP, IPsec)

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. INVISIBLE LASER RADIATION WHEN OPEN. AVOID EXPOSURE TO THE BEAM.

DANGER - INVISIBLE LASER RADIATION WHEN OPEN. AVOID DIRECT EXPOSURE TO BEAM.

DANGER - KLASSE 3B. UNSICHTBARE LASERSTRAHLUNG, WENN OFFEN. STRAHLENAUSSETZUNG VERMEIDEN.

VORSICHT - UNSICHTBARE LASERSTRAHLUNG KLASSE 3 B, WENN ABDECKUNG GEÖFFNET. NICHT DEM STRAHL AUSSETZEN.

ATTENZIONE - CLASSE 3B. RADIZIONI LASER INVISIBILI CON IL DISPOSITIVO APERTO. EVITARE L'ESPOSIZIONE AL RAGGIO.

PRECAUCIÓN - RADIACIÓN LÁSER INVISIBLE DE CLASE 3B PRESENTE AL ABRIR. EVITE LA EXPOSICIÓN AL HAZ.

PERIGO - CLASSE 3B. RADIAÇÃO LASER INVISÍVEL AO ABRIR. EVITE EXPOSIÇÃO DIRECTA AO FEIXE.

GEVAAR - KLASSE 3B. ONZICHTBARE LASERSTRALING INDIEN GEOPEND. VERMIJD BLOOTSTELLING AAN DE STRAAL.

ADVARSEL - KLASSE 3B. USYNLIG LASERSTRÁLING VED ÁBNING. UNNGÁ UDSÆTTELSE FOR STRÁLING.

ADVARSEL - KLASSE 3B. USYNLIG LASERSTRÁLING NÅR DEKSEL ÅPNES. UNNGÅ EKSPONERING FOR STRÁLEN.

VARNING - KLASSE 3B OSYNLIG LASERSTRÁLNING NÅR DENNA DEL ÅR ÖPPNAD. STRÁLEN ÅR FARLIG.

VAROITUS - LUOKAN 3B NÄKYMÄTTÖMÄLLE LASER-SÄTEILYÄ AVATTUNA. VÄLTÄ ALTISTUMISTA SÄTEELLE.

注 意 - CLASS 3B. 严禁打开，以免被不可见激光辐射泄漏灼伤

주 의 - 열리면 등급 3B 비가시 레이저 방사선 이 방출됩니다. 광선에 노출을 피하십시오.

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.

Regulatory information

Mercury Safety



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

Recycling



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

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.

Regulatory information

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.

(The United States of America only)

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

State of California Proposition 65 Warning (USA 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

Regulatory information

Russia only

AB57



Germany only

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

Turkey only

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

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'excede pas cinq.

Regulatory information

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.



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.

Regulatory information

Declaration of conformity (European countries)

Approvals and Certifications



Hereby, Samsung Electronics, declares that this [K220x series, K220xND series] is in compliance with the essential requirements and other relevant provisions of Low Voltage Directive (2006/95/EC), EMC Directive (2004/108/EC).

The declaration of conformity may be consulted at www.samsung.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 Samsung Electronics Co., Ltd. representative.

Regulatory information

China only

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型号	能效等级	典型能耗 (kW·h)
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MultiXpress K2200ND	0.97	1

依据国家标准 GB 25956-2010

Regulatory information

产品中有毒有害物质或元素的名称及含量

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

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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

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

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

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

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

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

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

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

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

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

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

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.

Default

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

DHCP

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

A shade of gray that represents light and dark portions of an image when color images are converted to grayscale; colors are represented by various shades of gray.

Halftone

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

Mass storage device, 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

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

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

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

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

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

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

Standardized test chart published by ITU-T for document facsimile transmissions.

JBIG

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

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

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

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

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

Modified Modified READ (MMR) is a compression method recommended by ITU-T T.6.

Modem

A device that modulates a carrier signal to encode digital information, and also demodulates such a carrier signal to decode transmitted information.

MR

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.

Glossary

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

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

A private automatic branch exchange (PABX) is an automatic telephone switching system within a private enterprise.

PCL

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

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

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

The media like paper, envelopes, labels, and transparencies which can be used in a printer, a scanner, a fax or, a copier.

PPM

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

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

See PostScript.

PSTN

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.

RADF

A Reverse Automatic Document Feeder (RADF) 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.

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

The sharpness of an image, measured in Dots Per Inch (DPI). The higher the dpi, the greater the resolution.

SMB

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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.