

ML-1670 Series
ML-1675 Series

Mono Laser Printer User's Guide

imagine the possibilities

Thank you for purchasing a Samsung product.



copyright

© 2011 Samsung Electronics Co., Ltd. All rights reserved.

This user's guide is provided for information purposes only. All information included herein is subject to change without notice.

Samsung Electronics is not responsible for any direct or indirect damages, arising from or related to use of this user's guide.

- Samsung and Samsung logo are trademarks of Samsung Electronics Co., Ltd.
- PCL and PCL 6 are trademarks of Hewlett-Packard Company.
- Microsoft, Internet Explorer, Windows, Windows Vista, Windows 7 and Windows 2008 Server R2 either registered trademarks or trademarks of Microsoft Corporation.
- PostScript 3 is a trademark of Adobe System, Inc.
- UFST® and MicroType™ are registered trademarks of Monotype Imaging Inc.
- TrueType, Mac and Mac OS are trademarks of Apple Inc., registered in the U.S and other countries.
- LaserWriter is a trademark of Apple Inc.
- All other brand or product names are trademarks of their respective companies or organizations.

Refer to the 'LICENSE.txt' file in the provided CD-ROM for the open source license information.

REV. 0.98

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.

Use common sense for operating any electrical appliance and whenever using your machine. Also, follow all warnings and instructions marked on the machine and in the accompanying literature. After reading this section, keep it in a safe place for future reference.

IMPORTANT SAFETY SYMBOLS

This section explains the meanings of all icons and signs in the user's guide. These safety symbols are in order, according to the degree of danger.

Explanation of all icons and signs used in the user's guide:

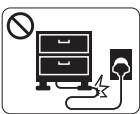
	Warning	Hazards or unsafe practices that may result in severe personal injury or death.
	Caution	Hazards or unsafe practices that may result in minor personal injury or property damage.
	Do not attempt.	
	Do not disassemble.	
	Do not touch.	
	Unplug the power cord from the wall socket.	
	Make sure the machine is grounded to prevent electric shock.	
	Call the service center for help.	
	Follow directions explicitly.	

OPERATING ENVIRONMENT

Warning



Do not use if the power cord is damaged or if the electrical outlet is not grounded.
► This could result in electric shock or fire.



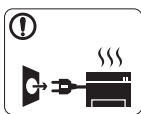
Do not bend, or place heavy objects on the power cord.
► Stepping on or allowing the power cord to be crushed by a heavy object could result in electric shock or fire.



Do not place anything on top of the machine (water, small metal or heavy objects, candles, lit cigarettes, etc.).
► This could result in electric shock or fire.



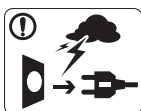
Do not remove the plug by pulling on the cord; do not handle the plug with wet hands.
► This could result in electric shock or fire.



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.

► This could result in electric shock or fire.

Caution



During an electrical storm or for a period of non-operation, remove the power plug from the electrical outlet.

► This could result in electric shock or fire.



Be careful, the paper output area is hot.

► Burns could occur.



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.

► Otherwise, this could result in electric shock or fire.



If the machine exhibits a sudden and distinct change in performance, unplug the machine from all interface connections and request assistance from qualified service personnel.

► Otherwise, this could result in electric shock or fire.



If the plug does not easily enter the electrical outlet, do not attempt to force it in.

► Call an electrician to change the electrical outlet, or this could result in electric shock.



Do not allow pets to chew on the AC power, telephone or PC interface cords.

► This could result in electric shock or fire and/or injury to your pet.



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.

► Otherwise, this could result in electric shock or fire.

OPERATING METHOD

Caution



Do not forcefully pull the paper out during printing.

► It can cause damage to the machine.



Be careful not to put your hand between the machine and paper tray.

► You may get injured.



Do not block or push objects into the ventilation opening.

► This could result in elevated component temperatures which can cause damage or fire.



Be care when replacing paper or removing jammed paper.

► New paper has sharp edges and can cause painful cuts.



When printing large quantities, the bottom part of the paper output area may get hot. Do not allow children to touch.

► Burns can occur.



When removing jammed paper, do not use tweezers or sharp metal objects.

► It can damage the machine.



Do not allow too many papers to stack up in the paper output tray.

► It can damage the machine.

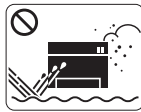


This machine's power interception device is the power cord.

► 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.

Caution



Before moving the machine, turn the power off and disconnect all cords.

Then lift the machine:

- If the machine weighs under 20 kg (44.09lbs), lift with 1 person.
- If the machine weighs 20 kg (44.09lbs) - 40kg (88.18lbs), lift with 2 people.
- If the machine weighs more than 40 kg (88.18lbs), lift with 4 or more people.

► The machine could fall, causing injury or machine damage.

-  Do not place the machine on an unstable surface.
- The machine could fall, causing injury or machine damage.

-  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.

-  Use only No.26 AWG^a or larger, telephone line cord, if necessary.
- Otherwise, it can cause damage to the machine.

-  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.

-  Make sure you plug the power cord into a grounded electrical outlet.
- Otherwise, this could result in electric shock or fire.

-  Do not overload wall outlets and extension cords.
- This can diminish performance, and 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 140V 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.

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.



Keep cleaning supplies away from children.

► Children could get hurt.



When you are working inside the machine replacing supplies or cleaning the inside, do not operate the machine.

► You could get injured.



Do not disassemble, repair or rebuild the machine by yourself.

► It can damage the machine. Call a certified technician when the machine needs repair.



Keep the power cable and the contact surface of the plug clean from dust or water.

► Otherwise, this could result in electric shock or fire.



To clean and operate the machine, strictly follow the user's guide provided with the machine.

► Otherwise, you could damage the machine.



Do not remove any covers or guards that are fastened with screws.

► The machine should only be repaired by a Samsung service technician.

► Fuser units should only be repaired by a certified service technician. Repair by non-certified technicians could result in fire or electric shock.

SUPPLY USAGE



Caution



Do not disassemble the toner cartridge.

► Toner dust can be dangerous if inhaled or ingested.



When storing supplies such as toner cartridges, keep them away from children.

► Toner dust can be dangerous if inhaled or ingested.



Do not burn any of the supplies such as toner cartridge or fuser unit.

► This could cause an explosion or uncontrollable fire.



Using recycled supplies, such as toner, can cause damage to the machine.

► In case of damage due to the use of recycled supplies, a service fee will be charged.



When changing the toner cartridge or removing jammed paper, be careful not to let toner dust touch your body or clothes.

► Toner dust can be dangerous if inhaled or ingested.



When toner gets on your clothing, do not use hot water to wash it.

► Hot water sets toner into fabric. Use cold water.

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.

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.

- **Wavelength:** 800 nm
- **Beam divergence**
 - **Paraller:** 11 degrees
 - **Perpendicular:** 35 degrees
- **Maximum power of energy output:** 12 mW

WARNING

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

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



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

DANGER - LASER RADIATION AVOID DIRECT
EXPOSURE TO BEAM.

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

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

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

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

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

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

ADVARSEL - USYNLIG LASERSTRÅLNING VED ÅBNING.
UNDGÅ UDSÆTTELSE FOR STRÅLNING.

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

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

VAROITUS - NÄKYMÄTÖNTÄ LASERSÄTEILYÄ AVATTAESSA.
VARO SUORAA ALTISTUMISTA SÄTEELLE.

注意 - 严禁揭开此盖, 以免激光泄露灼伤

주의 - 이 덮개를 열면 레이저광에 노출될 수 있으므로
주의하십시오.

Ozone Safety



During normal operation, this machine produces ozone. The ozone produced does not present a hazard to the operator. However, it is advisable that the machine be operated in a well ventilated area.

If you need additional information about ozone, contact your local Samsung dealer.

Power Save



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>.

Recycling



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

China only

回收和再循环

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

Correct Disposal of This Product (Waste Electrical & Electronic Equipment)



(Applicable in the European Union and other European countries with separate collection systems)

This marking shown 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 wastes at the end of its working life. To prevent possible harm to the environment or human health from uncontrolled waste disposal, separate this from other types of wastes and recycle it 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 this item for environmentally safe recycling.

Business users should contact their supplier and check the terms and conditions of the purchase contract. This product 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

Radio Frequency Emissions

FCC Information to the User

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

- This device may not cause harmful interference, and

- This device must accept any interference received, including interference that may cause undesired operation.

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

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or experienced radio TV technician for help.



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

Canadian Radio Interference Regulations

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

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

Russia only



Yalnızca Türkiye

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

Germany only

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

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 type 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.

Declaration of Conformity (European Countries)

Approvals and Certifications



The CE marking applied to this product symbolizes Samsung Electronics Co., Ltd. Declaration of Conformity with the following applicable 93/68/EEC Directives of the European Union as of the dates indicated:

Hereby, Samsung Electronics declare that this product is in compliance with the essential requirements and other relevant provisions of:

ML-1670 Series/ML-1675 Series: Low Voltage Directive (2006/95/EC) and EMC Directive (2004/108/EC).

The declaration of conformity may be consulted at www.samsung.com/printer, 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 (92/31/EEC), 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.

EC Certification

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

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

In the event of problems, you should contact the Euro QA Lab of Samsung Electronics Co., Ltd. in the first instance.

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

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	O	O	O	O	O	O
金属 (机箱)	X	O	O	O	O	O
印刷电路部件 (PCA)	X	O	O	O	O	O
电缆 / 连接器	X	O	O	O	O	O
电源设备	X	O	O	O	O	O
电源线	X	O	O	O	O	O
机械部件	X	O	O	O	O	O
卡盒部件	X	O	O	O	O	O
定影部件	X	O	O	O	O	O
扫描仪部件 - CCD (如果有)	X	X	O	O	O	O
扫描仪部件 - 其它 (如果有)	X	O	O	O	O	O
印刷电路板部件 (PBA)	X	O	O	O	O	O
墨粉	O	O	O	O	O	O
滚筒	O	O	O	O	O	O

O：表示该有毒有害物质在该部件所有均质材料中的含量均在 SJ/T 11363-2006 标准规定的限量要求以下。
X：表示该有毒有害物质至少在该部件的某一均质材料中的含量超出 SJ/T 11363-2006 标准规定的限量要求。

以上表为目前本产品含有有毒有害物质的信息。本信息由本公司的配套厂家提供，经本公司审核后而做成，本产品的部分部件含有有毒有害物质，这些部件是在现有科学技术水平下暂时无可替代物质，但三星电子将会一直为满足 SJ/T 11363-2006 标准而做不懈的努力。

about this user's guide

This user's guide provides information about basic understanding of the machine as well as detailed explanation on each step during actual usage. It is a valuable resource for both novice and professional users for the proper installation and use of the machine.

-  Read the safety information before using the machine.
- If you have a problem using the machine, refer to the troubleshooting chapter. (See "Troubleshooting" on page 48.)
- Terms used in this user's guide are explained in the glossary chapter. (See "Glossary" on page 64.)
- Illustrations in this user's guide may differ from your machine depending on its options or models.
- The procedures in this user's guide are mainly based on Windows XP.

Convention

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

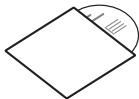
- Document is synonymous with original.
- Paper is synonymous with media, or print media.
- Machine refers to printer or MFP.

The following table offers the conventions of this guide:

Convention	Description	Example
Bold	For texts on the display or button names on the machine.	Cancel
Note	Provides additional information or details for the machine function and feature.	 The date format may differ from country to country.
Caution	Contains information you can use to protect the machine from possible mechanical damage or malfunction.	 Do not touch the surface of the drum located in the toner cartridge or imaging unit.
Footnote	Provides additional information on certain words or a phrases.	a. pages per minute
(“Cross-reference”)	Refers you to additional detailed information.	(See "Finding more information" on page 13.)

Finding more information

You can find information about setting up and using your machine in the following resources, either as a print-out or on screen.

Material name	Description
Quick Installation Guide 	This guide provides information on setting up your machine. This guide is provided in the box with the printer.
User's Guide 	This guide provides you with step-by-step instructions for using your machine's full features, maintaining your machine, troubleshooting, and replacing supplies.
Machine Driver Help	This help provides you with information about the printer driver and instructions for setting up the options for printing. (See "Using help" on page 34.)
Samsung website	If you have Internet access, you can get help, support, machine drivers, manuals, and order information from the Samsung website, www.samsung.com/printer .
Downloadable software	You can download useful software programs from the Samsung website. • Samsung AnyWeb Print: helps personal users to screen-capture the website screen in Windows Internet Explorer, Windows Firefox and Macintosh Safari easily. (http://solution.samsungprinter.com/personal/anywebprint)

features of your new product

Your new machine is equipped with a number of special features that improve the quality of the documents you print.

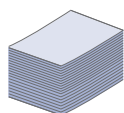
Special Features

Print with excellent quality and speed



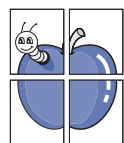
- You can print with a resolution of up to 1,200 x 1200 dpi effective output.
- Your machine prints A4-sized paper at up to 16 ppm and letter-sized paper at up to 17 ppm.

Handle many different types of printable material



- The 150-sheet tray supports plain paper in various sizes, letterhead, envelopes, labels, custom-sized media, postcards, and heavy paper.

Create professional documents



- Print Watermarks. You can customize your documents with words, such as "Confidential". (See "Using watermarks" on page 35.)
- Print Posters. The text and pictures of each page of your document are magnified and printed across the sheet of paper and can then be taped together to form a poster. (See "Printing posters" on page 34.)
- You can use preprinted forms and letterhead with plain paper. (See "Using overlays" on page 36.)

Save time and money



- To save paper, you can print multiple pages on one single sheet of paper. (See "Printing multiple pages on one sheet of paper" on page 34.)
- This machine automatically conserves electricity by substantially reducing power consumption when not in use.
- To save paper, you can print on both sides of the paper (Manual). (See "Printing on both sides of the paper (Manual)" on page 34.)

Print in various environments



- You can print with Windows as well as Linux and Macintosh OS systems.
- Your machine is equipped with a USB interface.

Features by Models

The machine is designed to support all of your document needs from printing to more advanced networking solutions for your business. Features by models include:

FEATURES	ML-1670 Series	ML-1675 Series
High Speed USB 2.0	•	•
Duplex (2-sided) printing (Manual)	•	•

(•: Included)

introduction

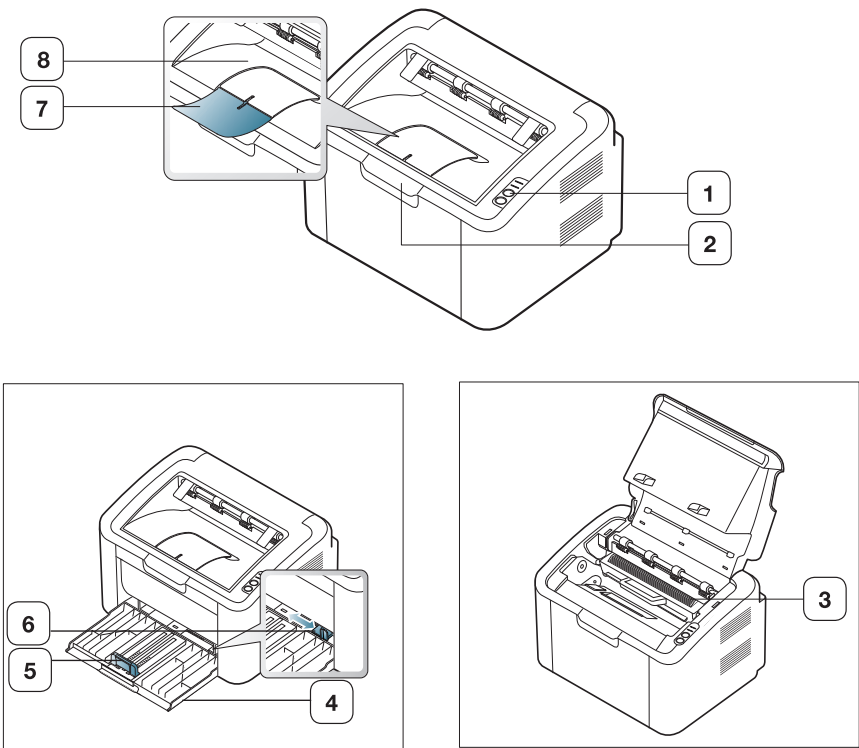
This chapter gives you an overview of your machine:

This chapter includes:

- Machine overview
- Control panel overview
- Understanding the status LED

Machine overview

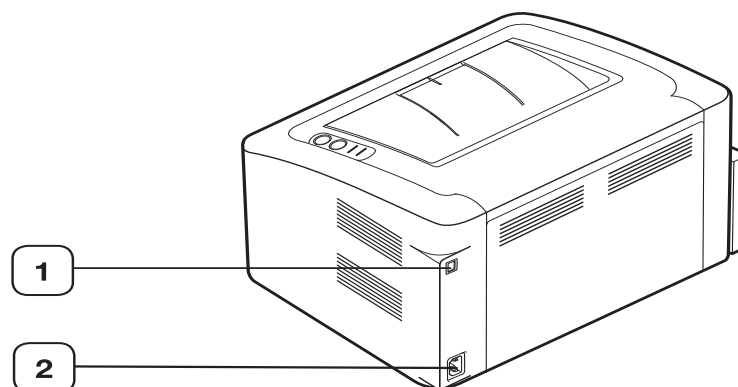
Front view



This illustration may differ from your machine depending on its model.

1	Control panel	5	Paper length guide
2	Top cover	6	Paper width guides
3	Toner cartridge	7	Output support
4	Tray	8	Output tray (face down)

Rear view



This illustration may differ from your machine depending on its model.

-
- 1 USB port
 - 2 Power cord receptacle
-

Control panel overview

This control panel may differ from your machine depending on the model.



1	8A	Jam	Shows the status of paper jams in your machine (See "Understanding the status LED" on page 19).
2	↔/△	Online/Error	Shows the status of your machine (See "Understanding the status LED" on page 19).
3	🖨️📄	Print Screen	Prints the displayed screen of your monitor. (See "(Print screen) button" on page 19.)
4	🔌	Power	You can turn the power on and off with this button. (See "(Power) button" on page 19.)

Understanding the status LED

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

LED	Status		Description
Jam (8V)	Orange	On	A paper jam has occurred. (See "Clearing paper jams" on page 48.)
Online /Error (↔/△)	Off		• The machine is off-line.
	Green	On	• The machine is in power saver mode. • The machine is on-line and can receive data from the computer.
		Blinking	• When the LED slowly blinks, the machine is receiving data from the computer. • When the LED rapidly blinks, the machine is printing data.
	Red	On	• The cover is opened. Close the cover. • There is no paper in the tray. Load paper in the tray. • The machine has stopped due to a major error. • Your system has some problems. If this problem occurs, contact a service representative. • A toner cartridge has almost reached its estimated cartridge life ^a . It is recommended to replace the toner cartridge. (See "Replacing the toner cartridge" on page 57.)
		Blinking	• A minor error has occurred and the machine is waiting for the error to be cleared. When the problem is cleared, the machine resumes printing. • A 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 48). • The machine is printing in manual feed mode or in manual duplex mode. • The machine is canceling a print job.

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, printing interval, media type, and media size. Some amount of toner may remain in the cartridge even when red LED is on and the printer stops printing.

 Samsung does not recommend using a non-genuine Samsung toner cartridge such as one that is refilled or remanufactured. Samsung cannot guarantee a 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 warranty.

 All printing errors will appear in the Printer Status(Windows) or Smart Panel(Linux, Mac OS X) program window. If the problem persists, contact a service representative.

Introducing the useful buttons

 (Print screen) button

By pressing the , you can:

Function	Description
Printing the active window	Press this button and the green LED will start blinking. When the green LED stops blinking, release the button.
Printing the whole monitor screen	Press this button and the green LED will start blinking. Release the button while it's blinking.
Printing a configuration sheet	In the ready mode, press and hold this button for about 10 seconds until the green LED blinks slowly, and release. (See "Printing a configuration sheet" on page 21.)
Supplies info report	In the ready mode, press and hold this button for about 15 seconds until the green LED blinks rapidly, and release.
Manual print	Press this button each time you load a sheet of paper in the tray if you have selected Manual Feeder for Source in your printer driver.

 • **Print Screen** can only be used in the Windows and Macintosh operating systems.

- When printing the active window/whole monitor screen using the print screen button, the machine may use more toner depending on what is being printed.
- You can only use this function if the machine's Samsung Easy Printer Manager or Smart Panel program is installed.

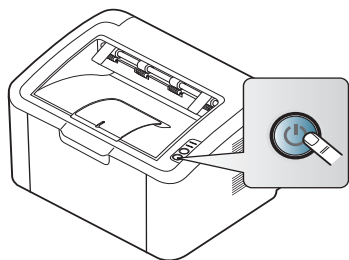
 (Power) button

By pressing the , you can:

Function	Description
Power On/Off	Press this button to turn the power on or off.
Cancel print job	During printing, press this button once. The print job is cleared from both the machine and the computer and then the machine returns to the ready mode. This may take some time depending on the size of the print job.  If you press this button for more than 2 seconds, the power goes off.

Turning on the machine

- 1. Plug in the power cord.
- 2. Press  on the control panel.



 If you want to turn the power off, press and hold this button for about 2 seconds.

getting started

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

This chapter includes:

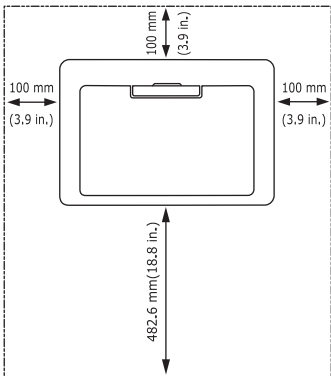
- Setting up the hardware
 - Printing a configuration sheet
 - Supplied software
- System requirements
 - Installing USB connected machine’s driver
 - Sharing your machine locally

Setting up the hardware

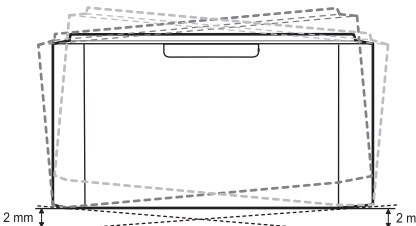
This section shows the steps to set up the hardware, as is explained in the Quick Install Guide. Make sure you read the Quick Install Guide first and follow the steps below:

Location

1. Select a stable location.
- Select a level, stable place with adequate space for air circulation. Allow extra space for opening cover(s) and tray(s).
- The area should be well ventilated and away from direct sunlight or sources of heat, cold, and humidity. Do not set the machine close to the edge of your desk or table.



Printing is suitable for altitudes under 1,000 m (3,281 ft). Place the machine on a flat, stable surface so that there is no incline greater than 2 mm (0.08 inch). Otherwise, printing quality may be affected.



2. Unpack the machine and check all the enclosed items.
3. Remove tape holding the machine securely.
4. Install the toner cartridge.
5. Load paper. (See "Loading paper in the tray" on page 28.)
6. Make sure that all cables are connected to the machine.
7. Turn the machine on. (See "Turning on the machine" on page 20.)

 This machine will not operate when the power main fails.

Printing a configuration sheet

Print a configuration page to make sure that the machine is operating properly.

To print a configuration page:

In the ready mode, press and hold  for about 10 seconds until the green LED blinks slowly, and release.

Supplied software

After you have set up your machine and connected it to your computer, you must install the printer software. If you are a Windows or Macintosh OS user, install the software from the supplied CD and if you are a Linux OS user, download the software from the Samsung website (www.samsung.com/printer) and install.

 Machine software is occasionally updated for reasons like the release of new operating system and etc. If needed, download the latest version from the Samsung website (www.samsung.com/printer).

OS	Contents
Windows	• Printer driver: Use this driver to take full advantage of your machine’s features. • Easy Printer Manager: This program 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. • Printer Status: This program monitors and informs you of the machine status.
Macintosh	• Printer Driver: Use this driver to take full advantage of your machine’s features. • Smart Panel: This program allows you to monitor the machine’s status.
Linux	• Unified Linux Driver: Use this driver to take full advantage of your machine’s features. • Smart Panel: This program allows you to monitor the machine’s status and alerts you when an error occurs during printing.

Before you begin, ensure that your system meets the following requirements:

Your machine supports the following Windows operating systems.

- 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 this machine.
- For Windows 2000, Services Pack 4 or higher is required.

OPERATING SYSTEM	Requirements (recommended)		
	CPU	RAM	free HDD space
Mac OS X 10.3 ~ 10.4	- Intel® Processors - PowerPC G4/ G5	128 MB for a PowerPC based Mac (512 MB) 512 MB for a Intel-based Mac (1 GB)	1 GB

Linux

Installing USB connected machine's driver

A locally connected machine is a machine directly connected to your computer by a USB cable.

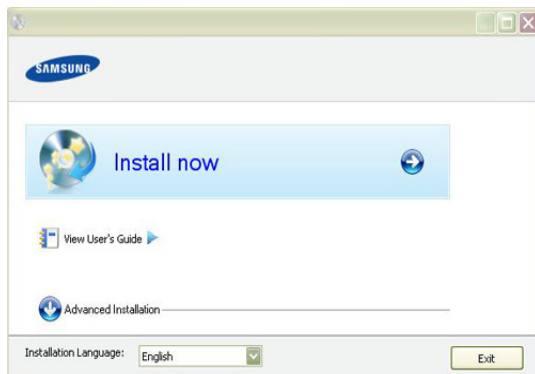
 Only use a USB cable no longer than 3 m (10 ft.).

You can install the machine software using the typical or custom method. The following steps are recommended for most users who use a machine directly connected to your computer. All components necessary for machine operations will be installed.

1. Make sure that the machine is connected to the computer and powered on.
 If the “**Found New Hardware Wizard**” window appears during the installation procedure, click **Cancel** to close the window.
2. Insert the supplied software CD into your CD-ROM drive.
 - The software CD should automatically run and an installation window will appear.
 - If the installation window does not appear, click **Start** and then **Run**. Type X:\Setup.exe, replacing “X” with the letter which represents your CD-ROM Drive. Click **OK**.
 - If you use Windows Vista, Windows 7 and Windows 2008 Server R2 click **Start > All programs > Accessories > Run**. Type X:\Setup.exe replacing “X” with the letter which represents your CD-ROM Drive and click **OK**.
 - If the **AutoPlay** window appears in Windows Vista, Windows 7 and

Windows 2008 Server R2, click **Run Setup.exe** in **Install or run program** field, and click **Continue** or **Yes** in the **User Account Control** windows.

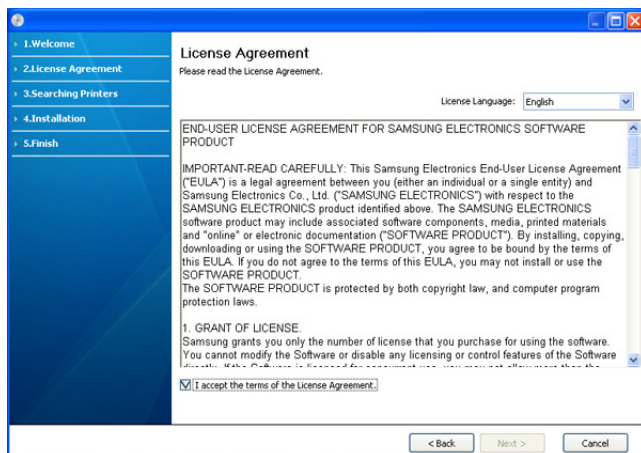
3. Select **Install now**.



If necessary, select a language from the drop-down list.

 The **Advanced Installation** has an option, **Custom Installation**. The **Custom Installation** allows you to select the machine's connection and choose individual component to install. Follow the instruction on the window.

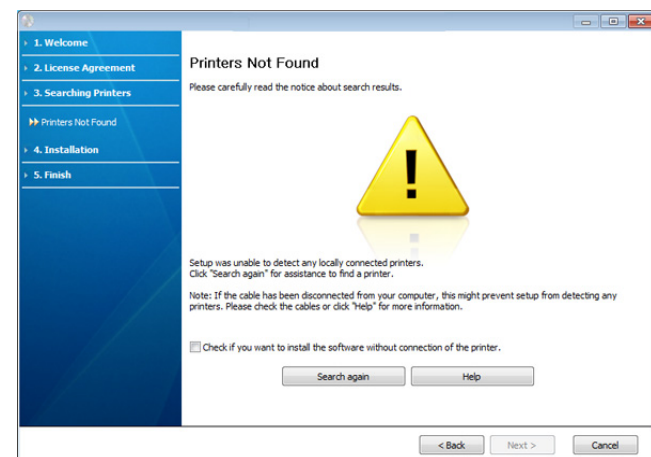
4. Read the **License Agreement**, and select **I accept the terms of the License Agreement**. Then, click **Next**.



The software searches for the machine.

 If your machine is not connected to the computer, the following

window will appear.



- After connecting the machine, click **Next**.
- **Check if you want to install the software without connecting the printer to the network or locally.**
 - Check this option to install the software without a machine connected. In this case, the print a test page window will be skipped.
- **Search again**
 - Press this button to research for the connected machine.
 - When you click this button, the firewall notice window appears; Turn off the firewall and click **Search again**. For Windows operating system, click **Start > Control Panel > Windows Firewall**, and inactivate this option. Then click **Next** in the **Firewall Notice** window. Turn off the firewall from the third party's program beside the operating system. Refer to the manual provided by individual programs.

- **Help**
 - This help button gives detailed information about how to connect the machine.

5. The searched machines will be shown on the screen. Select the one you wish to use and click **Next**.

 If the software searched only one machine, the confirmation window appears.

6. After the installation is finished, a window asking you to print a test page appears. If you want to print a test page, click **Print a test page**. Otherwise, just click **Next** and skip to step 8.
7. If the test page prints out correctly, click **Yes**. If not, click **No** to reprint it.
8. If you want to register your machine on Samsung web site, click **On-line Registration**.
9. Click **Finish**.

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

- a) Make sure that the machine is connected to your computer and powered on.
- b) From the **Start** menu, select **Programs** or **All Programs > Samsung Printers > your printer driver name > Uninstall**.
- c) Select the necessary option and follow the instructions in the window.

- d) After uninstalling the printer driver, reinstall it (see “Installing USB connected machine’s driver” on page 23).

Macintosh

The software CD that came with your machine provides you with the PPD file that allows you to use the CUPS driver or Apple LaserWriter driver (only available when you use a machine which supports the PostScript driver) for printing on a Macintosh computer.

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.
3. Double-click the CD-ROM icon that appears on your Macintosh desktop.
4. Double-click the **MAC_Installer** folder.
5. Double-click the **Installer OS X** icon.
6. Enter the password and click **OK**.
7. The Samsung Installer window opens. Click **Continue**.
8. Read the license agreement and click **Continue**.
9. Click **Agree** to agree to the license agreement.
10. Select **Easy Install** and click **Install**. **Easy Install** is recommended for most users. All components necessary for machine operations will be installed.
If you select **Custom Install**, you can choose individual components to install.
11. When the message which warns that all applications will close on your computer appears, click **Continue**.
12. After the installation is finished, click **Quit**.
13. Open the **Applications** folder > **Utilities** > **Print Setup Utility**.
 - For Mac OS X 10.5~10.6, open the **Applications** folder > **System Preferences** and click **Print & Fax**.
14. Click **Add** on the **Printer List**.
 - For Mac OS X 10.5~10.6, click the “+” icon; a display window will pop up.
15. For Mac OS X 10.3, select the **USB** tab.
 - For Mac OS X 10.4, click **Default Browser** and find the USB connection.
 - For Mac OS X 10.5~10.6, click **Default** and find the USB connection.
16. For Mac OS X 10.3, if Auto Select does not work properly, select **Samsung** in **Printer Model** and your machine name in **Model Name**.
 - For Mac OS X 10.4, if Auto Select does not work properly, select **Samsung** in **Print Using** and your machine name in **Model**.
 - For Mac OS X 10.5~10.6, if Auto Select does not work properly, select **Select a driver to use...** and your machine name in **Print Using**.

Your machine appears on the **Printer List**, and is set as the default machine.

17. Click **Add**.

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

Follow steps below to uninstall the driver for Macintosh.

- a) Make sure that the machine is connected to your computer and powered on.
- b) Insert the supplied software CD into your CD-ROM drive.
- c) Double-click CD-ROM icon that appears on your Macintosh desktop.
- d) Double-click the **MAC_Installer** folder.
- e) Double-click the **Installer OS X** icon.
- f) Enter the password and click **OK**.

- g) The Samsung Installer window opens. Click **Continue**.
- h) Select **Uninstall** and click **Uninstall**.
- i) When the message which warns that all applications will close on your computer appears, Click **Continue**.
- j) When the uninstall is done, click **Quit**.

Linux

You need to download Linux software packages from the Samsung website to install the printer software.

Follow the steps below to install the software.

Installing the Unified Linux Driver

1. Make sure that the machine is connected to your computer and powered on.
2. When the **Administrator Login** window appears, type in root in the **Login** field and enter the system password.
 You must log in as a super user (root) to install the machine software. If you are not a super user, ask your system administrator.
3. From the Samsung website, download the Unified Linux Driver package to your computer.
4. Right click the **Unified Linux Driver** package and extract the package.
5. Double click **cdroot > autorun**.
6. When the welcome screen appears, click **Next**.



7. When the installation is complete, click **Finish**.

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

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

Follow the steps below steps to uninstall the driver for Linux.

- a) Make sure that the machine is connected to your computer and powered on.
- b) When the **Administrator Login** window appears, type in “root” in the **Login** field and enter the system password.
You must log in as a super user (root) to uninstall the printer driver. If you are not a super user, ask your system administrator.
- c) Click the icon at the bottom of the desktop. When the Terminal screen appears, type in:
[root@localhost root]#cd /opt/Samsung/mfp/uninstall/

[root@localhost uninstall]#./uninstall.sh

- d) Click **Uninstall**.
- e) Click **Next**.
- f) Click **Finish**.

Installing the SmartPanel

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

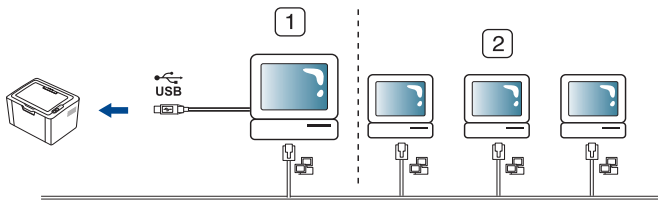


You must log in as a super user (root) to install the machine software. If you are not a super user, ask your system administrator.

3. From the Samsung website, download the **Smart Panel** package to your computer.
4. Right click the Smart Panel package and extract the package.
5. Double click **cdroot > Linux > smartpanel > install.sh**.

Sharing your machine locally

Follow the steps below to set up computers to share your machine locally. If the Host computer is directly connected to the machine by a USB cable and is also connected to the local network environment, the client computer connected to the local network can use the shared machine through the host computer to print.



1	Host computer	A computer which is directly connected to the machine by USB cable.
2	Client computers	Computers which use the machine shared through the host computer.

Windows

Setting up a host computer

1. Install your printer driver (See "Installing USB connected machine's driver" on page 22).
2. Click the Windows **Start** menu.
3. For Windows 2000, select **Settings > Printers**.
 - For Windows XP/2003, select **Printers and Faxes**.
 - For Windows 2008/Vista, select **Control Panel > Hardware and Sound > Printers**.
 - For Windows 7, select **Control Panel > Hardware and Sound > Devices and Printers**.
 - For Windows Server 2008 R2, select **Control Panel > Hardware > Devices and Printers**.
4. Right-click the printer icon.
5. For Windows XP/2003/2008/Vista, press **Properties**.
For Windows 7 and Windows Server 2008 R2, from context menus, select the **Printer properties**.



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

6. Select the **Sharing** tab.
7. Check **Change Sharing Options**.
8. Check the **Share this printer** checkbox.
9. Fill in the **Share Name** field. Click **OK**.

Setting up a client computer

1. Install your printer driver (See "Installing USB connected machine's driver" on page 22).
2. Click the Windows **Start** menu.
3. Select **All programs > Accessories > Windows Explorer**.
4. Enter the IP address of the host computer in the address bar and press Enter in your keyboard.



In case host computer requires a **User name** and **Password**, fill in User ID and password of the host computer account.

5. Right click the printer icon you want to share and select **Connect**.
6. If a set up complete message appears, click **OK**.
7. Open the file you want to print and start printing.

Macintosh



The following steps are for Mac OS X 10.5~10.6. Refer to Mac Help for other OS versions.

Setting up a host computer

1. Install your printer driver. (See "Macintosh" on page 24.)
2. Open the **Applications** folder > **System Preferences** and click **Print & Fax**.
3. Select the printer to share in the **Printers list**.
4. Select **Share this printer**.

Setting up a client computer

1. Install your printer driver. (See "Macintosh" on page 24.)
2. Open the **Applications** folder > **System Preferences** and click **Print & Fax**.
3. Click the "+" icon.
A display window showing the name of your shared printer appears.
4. Select your machine and click **Add**.

basic setup

After installation is complete, you may want to set the machine's default settings. Refer to the next section if you would like to set or change values. This chapter gives you step-by-step instructions for setting up the machine.

This chapter includes:

- Setting the default tray and paper

Setting the default tray and paper

You can select the tray and paper you would like to keep using for printing job.

From your computer

Windows

1. Click the Windows **Start** menu.
2. For Windows 2000, select **Settings > Printers**.
 - For Windows XP/2003, select **Printer and Faxes**.
 - For Windows 2008/Vista, select **Control Panel > Hardware and Sound > Printers**.
 - For Windows 7, select **Control Panel > Hardware and Sound > Devices and Printers**.
 - For Windows Server 2008 R2, select **Control Panel > Hardware > Devices and Printers**.
3. Right-click on your machine.
4. For Windows XP/2003/2008/Vista, press **Printing Preferences**.
For Windows 7 and Windows Server 2008 R2, from context menus, select the **Printing Preferences**.



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

5. Click **Paper** tab.
6. Select tray and its options, such as paper size and type.
7. Press **OK**.



If you want to use special-sized paper such as a billing paper, select **Edit...** in the **Paper** tab in the **Printing Preferences**. (See "Opening printing preferences" on page 33.)

Macintosh

Macintosh does not support this function. Macintosh users need to change the default setting manually each time they want to print using other settings.

1. Open a Macintosh application and select the file you want to print.
2. Open the **File** menu and click **Print**.
3. Go to **Paper Feed** pane.
4. Set appropriate tray from which you want to print.
5. Go to **Paper** pane.
6. Set paper type to correspond to the paper loaded in the tray from which you want to print.
7. Click **Print** to print.

Linux

1. Open **Terminal Program**.
2. When the Terminal screen appears, type in the following:
[root@localhost root]# lpr <FileName>
3. Select **Printer** and click **Properties...**
4. Click on the **Advanced** tab.
5. Select the tray (source) and its options, such as paper size and type.
6. Press **OK**.

Using The power saving feature

When you will not be using the machine for a while, you can use this feature to save power.

1. Install the driver (See "Installing USB connected machine's driver" on page 22).
2. Select **Start > Programs or All Programs > Samsung Printers > Samsung Easy Printer Manager > Samsung Easy Printer Manager**.
3. Select **Device Settings > Machine > Power Save**.
4. Select a time you want from the drop-down list.
5. Click **Save**.