Color Laser Printer

User's Guide

imagine the possibilities

Thank you for purchasing a Samsung product.

SAMSUNG

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REV. 1.00

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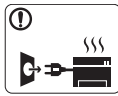
If the machine gets overheated, it releases smoke, makes strange noises, or generates an odd odor, immediately turn off the power switch and unplug the machine.

► 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.
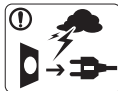
► This could result in electric shock or fire.

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 (44.09lb), lift with 1 person.

• If the machine weighs 20 kg (44.09lb) - 40kg (88.18lb), lift with 2 people.

• If the machine weighs more than 40 kg (88.18lb), 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.

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.

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

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

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

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

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

► Otherwise, you could damage the machine.

SUPPLY USAGE

⚠ **Caution**

Do not disassemble the toner cartridge.
► 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.

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

► Toner dust can be dangerous if inhaled or ingested.

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 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 60825-1:1993 + A1:1997 + A2:2001.
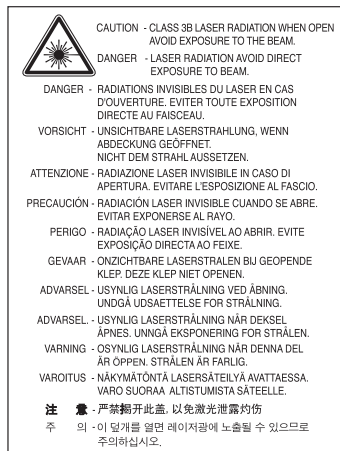
Class I laser products are not considered to be hazardous. The laser system and printer are designed so there is never any human access to laser radiation above a Class I level during normal operation, user maintenance or prescribed service condition.

- **Wavelenght**: 800 nm
- **Beam divergence**
  - **Paraller**: 12 degrees
  - **Perpendicular**: 30 degrees
- **Maximum power or energy output**: 5 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 UDSAETTELSE FOR STRÅLNING.
ADVARSEL.	- USYNLIG LASERSTRÅLNING NÅR DEKSEL ÅPNES. UNNGÅ EKSPONERING FOR STRÅLEN.
VARNING	- OSYNLIG LASERSTRÅLNING NÄR DENNA DEL ÄR ÖPPEN. STRÅLEN ÄR FARLIG.
VAROITUS	- NÄKYMÄTÖNTÄ LASERSÄTEILYÄ AVATTAESSA. VARO SUORAA ALTISTUMISTA SÄTEELLE.
注 意	- 严禁揭开此盖, 以免激光泄露灼伤
주 의	- 이 덮개를 열면 레이저광에 노출될 수 있으므로 주의하십시오.

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.

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.

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.

UNITED STATES OF AMERICA

Federal Communications Commission (FCC)

Intentional emitter per FCC Part 15

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

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

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

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

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

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

FCC Statement for Wireless LAN use:

⚠️ While installing and operating this transmitter and antenna combination the radio frequency exposure limit of 1m W/cm2 may be exceeded at distances close to the antenna installed. Therefore, the user must maintain a minimum distance of 20cm from the antenna at all times. This device cannot be colocated with another transmitter and transmitting antenna.

TURKEY ONLY

- RoHS

  EEE Yönetmeliğine Uygundur.
  This EEE is compliant with RoHS.

- Bu ürünün ortalama yaşam süresi 7 yıl, garanti suresi 2 yildir.

RUSSIA ONLY

AB57

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:

CLP-320 Series: Low Voltage Directive (2006/95/EC), EMC Directive (2004/108/EC)

CLP-325W(K): R&TTE Directive (1999/5/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.

European Radio Approval Information (for products fitted with EU-approved radio devices)

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

Wireless devices that may be in your system are only qualified for use in the European Union or associated areas if a CE mark

with $C\,\epsilon$ a Notified Body Registration Number and the Alert Symbol is on the system label.

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

European States qualified under wireless approvals:

EU

Austria, Belgium, Cyprus, Czech Republic, Denmark, Estonia, Finland, France (with frequency restrictions), Germany, Greece, Hungary, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, The Netherlands, Poland, Portugal, Slovakia, Slovenia, Spain, Sweden and the U.K.

EEA/EFTA countries

Iceland, Liechtenstein, Norway and Switzerland

European States with restrictions on use:

EU

In France, the frequency range is restricted to 2446.5-2483.5 MHz for devices above 10 mW transmitting power such as wireless

EEA/EFTA countries

No limitations at this time

REGULATORY COMPLIANCE STATEMENTS

Wireless Guidance

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

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

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

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

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

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

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

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

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

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

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

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

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This product includes cryptographic software written by Eric Young (eay@cryptsoft.com). This product includes software written by Tim Hudson (tjh@cryptsoft.com).

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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

○：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。

×：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 72).
- • Terms used in this user's guide are explained in the glossary chapter (See "Glossary" on page 92).
- • 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.
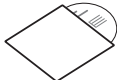
CONVENTION	DESCRIPTION	EXAMPLE
Bold	For texts on the display or button names on the machine.	**Cancel**
Note	Provides additional information or details for the machine function and feature.	The date format may differ from country to country.
Caution	Contains information you can use to protect the machine 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 phrase.	a. pages per minute
("Cross-reference")	Refers you to additional detailed information.	(See "Finding more information" on page 16)

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 help information about the printer driver and instructions for setting up the options for printing (See "Using help" on page 58).
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 easily. (http://solution.samsungprinter.com/personal/anywebprint) • **Samsung Easy Color Manager**: helps Samsung color laser printer users to adjust color as they like. (http://solution.samsungprinter.com/personal/colormanager)

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 in a full range of colors using cyan, magenta, yellow and black.
- You can print with a resolution of up to 2400 x 600 dpi effective output.
- Your machine prints A4-sized paper at up to 16 ppm and Letter-sized paper at up to 17 ppm in black and white mode and 4 ppm in color mode.

Handle many different types of printable material
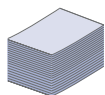
- The tray holds up to 150 sheet of plain paper in various sizes.
- You can load different custom-size print media in the tray.

Create professional documents (Windows only)
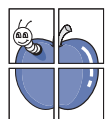
- Print Watermarks. You can customize your documents with words such as "Confidential" (See "Using watermarks" on page 59).
- Print Posters. The text and pictures of each page of your document are magnified and printed across the sheet of paper and can then be taped together to form a poster (See "Printing posters" on page 58).
- You can use preprinted forms and letterhead with plain paper (See "Using overlay" on page 60).

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 58).
- 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 59).

Print in various environments

- You can print with Windows as well as Linux and Macintosh OS systems.
- Your machine is equipped with a Hi-Speed USB 2.0 interface.
- Your machine comes with a built-in network interface, Ethernet 10/100 BaseTX.
  (CLP-320N(K)/CLP-321N/CLP-325W(K) only)
- Your machine comes with a built-in network Interface 802.11 b/g/n wireless LAN. (CLP-325W(K) only)

IPv6 (CLP-320N(K)/CLP-321N/CLP-325W(K) only)

The machine supports IPv6 (See "IPv6 configuration" on page 32).

DLNA

This Machine supports DLNA Printing as a DMPr (Digital Media Printer). You can easily print by the DLNA Device including Printing Control Capability on the home network.

FEATURES BY MODELS

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

FEATURES	CLP-320(K) CLP-321 CLP-325(K) CLP-326	CLP-320N(K) CLP-321N	CLP-325W(K)
Hi-Speed USB 2.0	●	●	●
Network Interface Ethernet 10/100 BaseTX wired LAN		●	●
Network Interface 802.11 b/g/n wireless LAN[a]			●
Duplex (2-sided) printing (Manual)	●	●	●

a. Depending on your country, wireless LAN cards may not be available. Contact your local Samsung dealer or the retailer where you bought your printer.

(●: Included, Blank: Not available)

introduction

This chapter gives you an overview of your machine.

This chapter includes:

- Machine overview
- Control panel overview

- Understanding the control panel

MACHINE OVERVIEW

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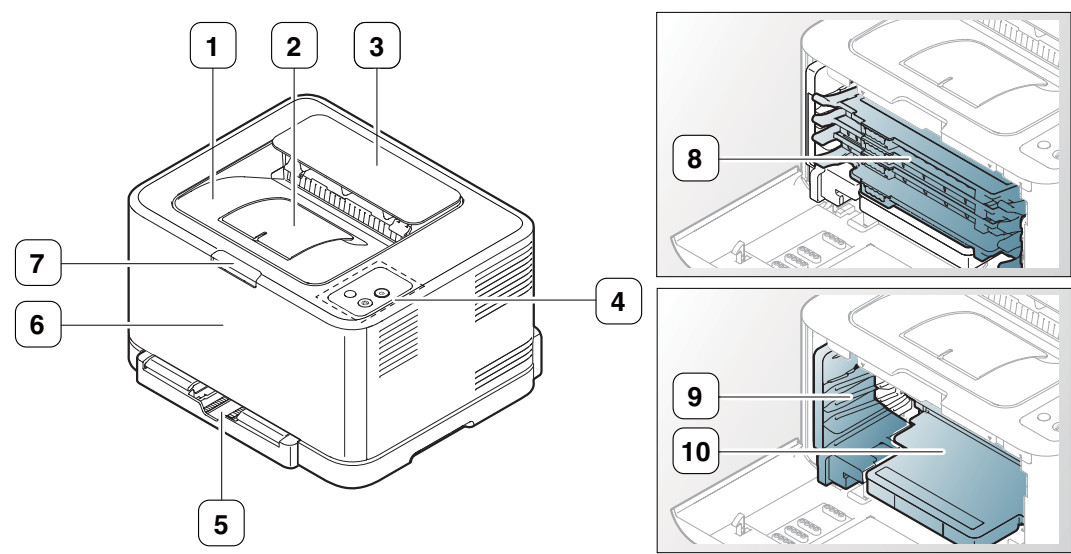
This illustration may differ from your machine depending on its model.

1	Output tray (face down)	6	Front cover
2	Output support	7	Front cover release button
3	Top cover	8	Toner cartridges
4	Control panel	9	Waster toner container
5	Tray	10	Imaging unit

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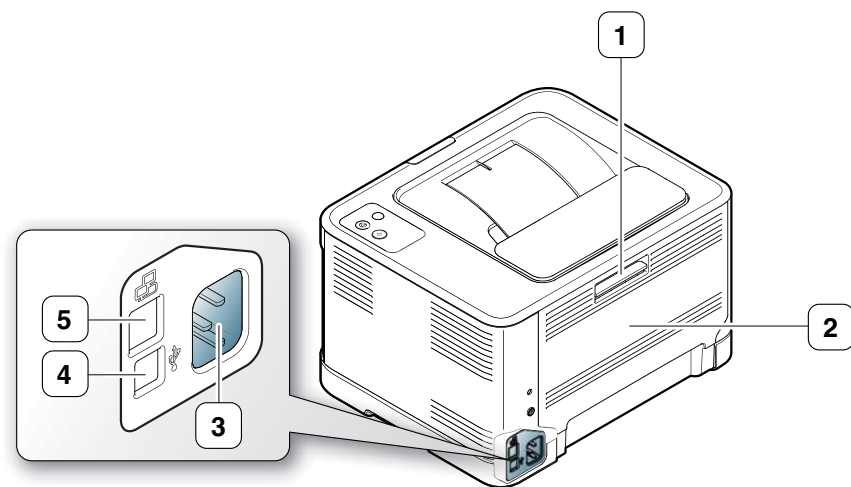
This illustration may differ from your machine depending on its model.

1	Rear cover release button	**4**	USB port
2	Rear cover	**5**	Network port[a]
3	Power receptacle		

a. CLP-320N(K)/CLP-321N only.

CONTROL PANEL OVERVIEW

This illustration may differ from your machine depending on its model.
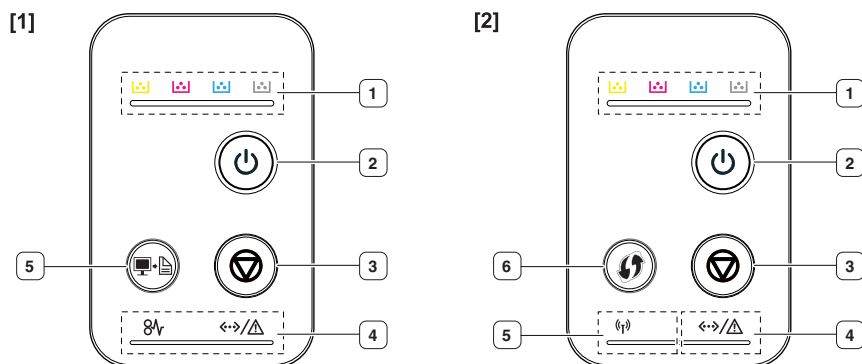
[1] CLP-320(K)/CLP-321/CLP-325(K)/ CLP-326/CLP-320N(K)/CLP-321N

1	Toner colors	Shows the status of each toner cartridge (See "Status/ Toner colors LEDs" on page 22).
2	Power	You can turn the power on and off with this button (See "Power button" on page 23).
3	Cancel	Stops an operation at any time and there are more functions (See "Cancel button" on page 23).
4	Status LED	Shows the status of your machine (See "Status/ Toner colors LEDs" on page 22).
5	Print Screen[a]	Prints the displayed screen of your monitor (See "Print screen button" on page 23).
	Demo Print[b]	Prints a demo page (See "Demo print button" on page 23).

a. CLP-320(K)/CLP-321/CLP-325(K)/ CLP-326 only.
b. CLP-320N(K)/CLP-321N only.

[2] CLP-325W(K)

1	Toner colors	Shows the status of each toner cartridge (See "Status/ Toner colors LEDs" on page 22).
2	Power	You can turn the power on and off with this button (See "Power button" on page 23).
3	Cancel	Stops an operation at any time and there are more functions (See "Cancel button" on page 23).
4	Status LED	Shows the status of your machine (See "Status/ Toner colors LEDs" on page 22).
5	Wireless	Shows the status of wireless network. When the LED on, the machine is connected wirelessly (See "Wireless LED" on page 22).
6	WPS	If your wireless access point supports WPS (Wi-Fi Protected Setup™), you can configure the wireless network connection easily without a computer (See "Using a wireless network with WPS button on the control panel" on page 36).

UNDERSTANDING THE CONTROL PANEL

Status/ Toner colors LEDs

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

LED	STATUS	TONER COLORS LED	DESCRIPTION
Online/Error (‹··›/⚠)	Off	All LEDs off	The machine is off-line.
	Solid green	All LEDs off	The machine is on-line and can receive data from a computer.
	Slowly blinking green	All LEDs off	When the Status LED blinks green slowly, the machine is receiving data from a computer.
	Quickly blinking green	All LEDs off	When the Status LED blinks green quickly, the machine is printing data.
	Solid green	Corresponding LED blinks red	Each toner cartridge is near the end of its life.
		Corresponding LED blinks red successively	The machine is warming up.
	Solid red	All LEDs off	• The cover is open. Close the cover. • There is no paper in the tray. Load paper in the tray. • The machine has stopped due to a major error. • The machine is experiencing system problems requiring service, such as LSU error, fuser error, or ITB error. Contact the service representative.
		Corresponding LED is solid red	• 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 84). • The machine cannot recognize the status of toner cartriges and the supplies information. Open and close the cover and check if the machie can operate properly. If the problem persists, turn the power off and on.

LED	STATUS	TONER COLORS LED	DESCRIPTION
	Blinks red	Corresponding LED is solid red	• A minor error has occurred and the machine is waiting for the error to be cleared. When the problem is cleared, the machine resumes. • 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 in the cartridge (See "Redistributing toner" on page 72).
Jam (8\/)	Lights orange	All LEDs off	A paper jam has occurred (See "Clearing paper jams" on page 73).

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 19798. The number of pages may be affected by operating environment, printing interval, graphics, 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 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 be appear in the Smart Panel program window. If the problem persists, call for service (See "Using the Smart Panel program" on page 66).

Wireless LED

WIRELESS LED STATUS		DESCRIPTION
Blue	Off (⌐)	Wireless network is disconnected.
	On (⌐)	Wireless network is connected.
	Slowly blinks (⌐)	The machine starts connecting to a wireless network.
	Quickly blinks (⌐)	• The machine is connecting to access point (or wireless router). • Wireless network connection is being disconnected.

INTRODUCING THE USEFUL BUTTONS

Print screen button

🖥·📄 (CLP-320(K)/CLP-321/CLP-325(K)/ CLP-326 only)

By pressing the 🖥·📄 (**Print screen** button), you can do the following functions.

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.

- The page will be printed on the default page like A4 or Letter.
- You can only use this function with a USB-connected machine.
- **Print screen** can only be used with Windows and Macintosh operating systems.
- You can use this function only when the Smart Panel program is installed.

Demo print button

 (CLP-320N(K)/CLP-321N only)

It prints a demo page by pressing this button only. The printed page shows the color print quality potential and overall print characteristics of the machine.

Cancel button

By pressing the (**Cancel** button), you can do the following functions.

FUNCTION	DESCRIPTION
Printing demo page	In ready mode, press and hold this button for about 2 seconds until the status LED blinks slowly, and release (See "Printing a demo page" on page 24).
Printing configuration sheets	In ready mode, press and hold this button for about 5 seconds until the status LED blinks quickly, and release (See "Printing a machine report" on page 69).
Canceling print job	Press (cancel button) during printing. The red LED blinks while the print job is cleared from both the machine and the computer and then the machine returns to ready mode. This may take some time depending on the size of the print job.

WPS button

(CLP-325W(K) only)

This feature automatically detects which WPS (Wi-Fi Protected Setup™) mode your access point uses. By pushing a button on the wireless LAN router / access point and the machine, you can setup the wireless network and security settings（See "Using a wireless network with WPS button on the control panel" on page 36).
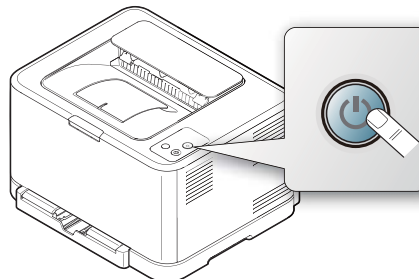
Power button

This button must be used to turn the machine on/off.

Turning on the machine
1. Plug in the power cord.
2. Press (**Power** button) on the control panel.

If you want to turn the power off, press and hold this button for about 3 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 demo page
- 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 Installation Guide. Make sure you read the Quick Installation 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 to open 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.
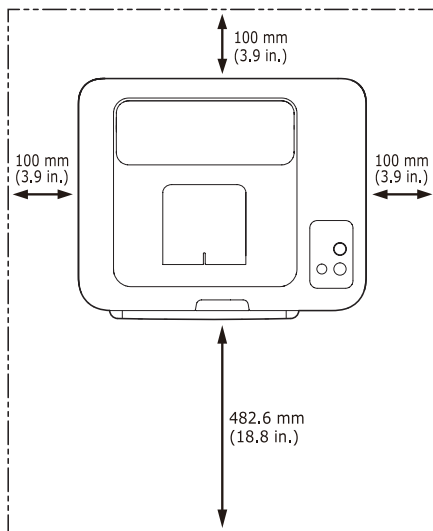
   Printing is suitable for altitudes under 1,000 m (3,281 ft). Refer to the altitude setting to optimize your printing (See "Altitude adjustment" on page 46).

   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. Load paper (See "Loading paper in the tray" on page 50).
5. Make sure that all cables are connected to the machine.
6. Turn the machine on (See "Turning on the machine" on page 23).

   ⚠ This machine will not operate when the power main fails.

PRINTING A DEMO PAGE

Print a demo page to make sure that the machine is operating correctly.

To print a demo page

In ready mode, press and hold the ◎ **Cancel** button for 2 seconds, then release.

> Also, you can use the 🖨 **Demo page** button for printing a demo page. This button is supported on CLP-320N(K)/CLP-321N only.

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. 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. • **Smart Panel:** This program allows you to monitor the machine's status and alerts you when an error occurs during printing. • **Printer Settings Utility:** This program allows you to set up printer's other options from your computer. • **SetIP:** Use this program to set your machine's TCP/IP addresses. (CLP-320N(K)/CLP-321N/CLP-325W(K) only)
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 and alerts you when an error occurs during printing. • **Printer Settings Utility:** This program allows you to set up printer's other options from your computer. • **SetIP:** Use this program to set your machine's TCP/IP addresses. (CLP-320N(K)/CLP-321N/CLP-325W(K) only)
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. • **Printer Settings Utility:** This program allows you to set up printer's other options from your computer. • **SetIP:** Use this program to set your machine's TCP/IP addresses. (CLP-320N(K)/CLP-321N/CLP-325W(K) only)

SYSTEM REQUIREMENTS

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

Microsoft® Windows®

Your machine supports the following Windows operating systems.

OPERATING SYSTEM	REQUIREMENT (RECOMMENDED)		
	CPU	RAM	FREE HDD SPACE
Windows® 2000	Intel® Pentium® II 400 MHz (Pentium III 933 MHz)	64 MB (128 MB)	600 MB
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 (2048 MB)	10 GB

OPERATING SYSTEM	REQUIREMENT (RECOMMENDED)		
	CPU	RAM	FREE HDD SPACE
Windows Vista®	Intel® Pentium® IV 3 GHz	512 MB (1024 MB)	15 GB
Windows® 7	Intel® Pentium® IV 1 GHz 32-bit or 64-bit processor or higher	1 GB (2 GB)	16 GB
	• 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 (2048 MB)	10 GB

> • Internet Explorer® 5.0 or higher is the minimum requirement for all Windows operating systems.
> • Administrator rights are required to install the software.
> • **Windows Terminal Services** is compatible with this machine.

Macintosh

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
Mac OS X 10.5	• Intel® Processors • 867 MHz or faster Power PC G4/ G5	512 MB (1 GB)	1 GB
Mac OS X 10.6	• Intel® Processors	1 GB (2 GB)	1 GB

Linux

ITEM	REQUIREMENT (RECOMMENDED)
Operating system	RedHat® Enterprise Linux WS 4, 5 (32/64 bit) Fedora Core 2~10 (32/64 bit) SuSE Linux 9.1 (32 bit) OpenSuSE® 9.2, 9.3, 10.0, 10.1, 10.2, 10.3, 11.0, 11.1 (32/64 bit) Mandrake 10.0, 10.1 (32/64 bit) Mandriva 2005, 2006, 2007, 2008, 2009 (32/64 bit) Ubuntu 6.06, 6.10, 7.04, 7.10, 8.04, 8.10 (32/64 bit) SuSE Linux Enterprise Desktop 9, 10 (32/64 bit) Debian 3.1, 4.0, 5.0 (32/64 bit)
CPU	Pentium® IV 2.4 GHz (Intel Core™2)
RAM	512 MB (1024 MB)
Free HDD space	1 GB (2 GB)

INSTALLING USB CONNECTED MACHINE'S DRIVER

A locally connected machine is a machine directly connected to your computer by a USB cable. If your machine is attached to a network, skip the following steps below and go on to installing network connected machine's driver (See "Installing network connected machine's driver" on page 33).

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

Windows

You can install the machine software using the typical or custom method.

The following steps below 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** in 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 or Windows Server 2008 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 or Windows Server 2008 R2, click **Run Setup.exe** in **Install or run program** field, and click **Continue** or **Yes** in the **User Account Control** window.
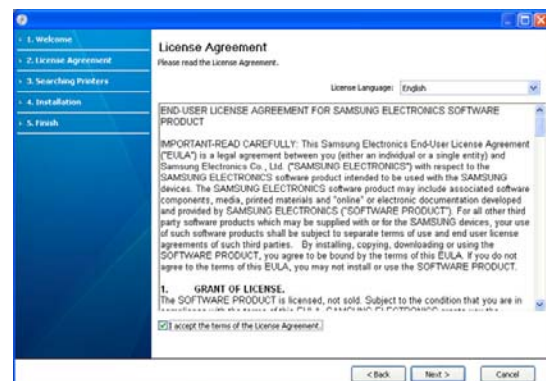
3. Select **Install now**.

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

   > - For CLP-325W(K) installation window, you can access **Wireless Setting and Installation** menu. The **Wireless Setting and Installation** allows you to install a wireless network to connect to the machine with USB cable (See "Setting a wireless network with USB cable" on page 38).
   > - The **Advanced Installation** has two options, **Custom Installation** and **Install Software Only**. The **Custom Installation** allows you to select the machine's connection and choose individual component to install. The **Install Software Only** allows you to install the supplied software such as Smart Panel. Follow the guide in the window.
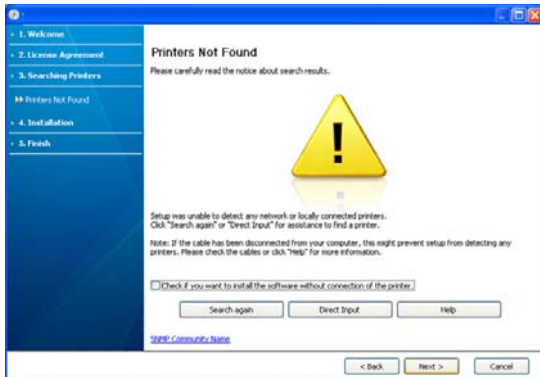
4. Read **License Agreement**, and select **I accept the terms of the License Agreement**. Then, click **Next**.

   The program searches for the machine.

   > If your machine is not found in the network or locally, the following

window will appear.

- • **Check if you want to install the software without connection of the printer.**
  - Check this option to install this program without a machine connected. In this case, the print a test page window will be skipped, and completes the installation.
- • **Search again**
  When you press this button, the firewall notice window appears.
  - Turn off the firewall and **Search again**. For Window operating system, click **Start** > **Control Panel** > **Windows Firewall**, and inactivate this option. For other operating system, refer to its on-line guide.
  - Turn off the firewall from the third party's program beside the operating system. Refer to the manual provided by individual programs.
- • **Direct Input**
  The **Direct Input** allows you to search a specific machine on the network.
  - **Search by IP address**: Enter the IP address or the host name. Then click **Next**.
    To verify your machine's IP address, print a network configuration report (See "Printing a machine report" on page 69).
  - **Search by network path**: To find a shared machine (UNC Path), enter the shared name manually or find a shared printer by clicking the **Browse** button. Then click **Next**.
- • **Help**
  If your machine is not connected to the computer or network, This help button gives you the 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 driver 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 website, click **On-line Registration**.

✎ If your machine is not connected yet to the computer, click **How to connect?**. **How to connect?** gives detailed information about how to connect the machine. Follow the instructions in the window.

9. Click **Finish**.

✎ If the printer driver does not work properly, follow the steps below to repair or reinstall the driver.
   a) Make sure that the machine is connected to your machine and powered on.
   b) From the **Start** menu, select **Programs** or **All Programs** > **Samsung Printers** > **your printer driver name** > **Maintenance**.
   c) Select the option you wish to execute, then follow the instruction on the window.

Macintosh

The software CD that came with your machine provides you with the Driver files that allow you to use the CUPS driver or PostScript 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 X10.4, 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**.

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**.

Installing the Printer Settings Utility

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 Printer Settings Utility package to your computer.
4. Right-click the **Printer Settings Utility** package and extract the package.
5. **Double click cdroot** > **Linux** > **psu** > **install.sh**.

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

Follow the steps below 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**.

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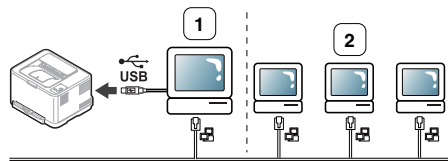
1	Host computer	A computer which is directly connected to the machine by USB cable.
2	Client computers	Computers which use the machine shared through the host computer.

Windows

Setting up a host computer
1. Install your printer driver (See "Installing USB connected machine's driver" on page 26, "Installing network connected machine's driver" on page 33).
2. Click the Windows **Start** menu.
3. For Windows 2000, select **Settings** > **Printers**.
   - For Windows XP/Server 2003, select **Printers and Faxes**.
   - For Windows Server 2008/Vista, select **Control Panel** > **Hardware and Sound** > **Printers**.
   - For Windows 7, select **Control Panel** > **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/Server 2003/Server 2008/Vista, press **Properties**. For Windows 7 or 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 26, "Installing network connected machine's driver" on page 33).
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 27).
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 27).
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**.

network setup (clp-320n(k)/clp-321n/clp-325w(k) only)

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

This chapter includes:

• Network environment
• Introducing useful network programs

• Using a wired network
• Installing network connected machine's driver

NETWORK ENVIRONMENT

You need to set up the network protocols on the machine to use it as your network machine. You can set up the basic network settings through the machine's control panel.

The following table shows the network environments supported by the machine:

ITEM	REQUIREMENTS
Network interface	• Ethernet 10/100 Base-TX • Network Interface 802.11 b/g/n wireless LAN (CLP-325W(K) only)
Network operating system	• Windows 2000/Server 2003 /Server 2008/XP/Vista/7/Server 2008 R2 • Various Linux OS • Mac OS X 10.3 ~ 10.6
Network protocols	• TCP/IPv4 • DHCP, BOOTP • DNS, WINS, Bonjour, SLP, UPnP • Standard TCP/IP Printing (RAW), LPR, IPP • SNMPv 1/2/3, HTTP, IPSec • TCP/IPv6 (DHCP, DNS, RAW, LPR, SNMPv 1/2/3, HTTP, IPSec) See "IPv6 configuration" on page 32.
Wireless security	• Authentication: Open System, Shared Key, WPA Personal, WPA2 Personal (PSK) • Encryption: WEP64, WEP128, TKIP, AES

INTRODUCING USEFUL NETWORK PROGRAMS

There are several programs available to setup the network settings easily in 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.

SyncThru™ Web Service

Web server embedded on your network machine, which allows you to:

• Configure the network parameters necessary for the machine to connect to various network environments.
• Customize machine settings.
  See "Using SyncThru™ Web Service" on page 65.

SetIP

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 setting using SetIP Program (Windows)" on page 31.
• See "IPv4 setting using SetIP Program (Macintosh)" on page 31.
• See "IPv4 setting using SetIP Program (Linux)" on page 32.

> TCP/IPv6 is not supported by this program.

USING A WIRED NETWORK

You must set up the network protocols on your machine to use it on your network. This chapter will show you how this is easily accomplished.

You can use network after connecting network cable to a corresponding port on your machine.
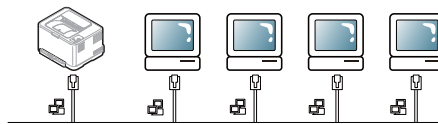
Printing network configuration report

You can print a **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 and troubleshoot problems.

To print the report:

In ready mode, press and hold the ⊚ (cancel button) for about 5 seconds.

You can find your machine's MAC address and IP address.

For example:

• MAC Address: 00:15:99:41:A2:78
• IP Address: 192.0.0.192

Setting IP address

Firstly, 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.

In a few situations the IP address must be set manually. This is called a static IP and is often required in corporate Intranets for security reasons.

- **DHCP IP assignment**: Connect your machine to the network, and wait a few minutes for the DHCP server to assign an IP address to the machine. Then, print the **Network Configuration Report** as explained above. If the report shows that the IP address has changed, the assignment was successful. You will see the new IP address in the report.
- **Static IP assignment**: Use SetIP program to change the IP address from your computer.

In an office environment, we recommend that you contact a network administrator to set this address for you.

IPv4 configuration

IPv4 setting using SetIP Program (Windows)

This program is for manually setting the network IP address of your machine using its MAC address to communicate with the machine. A MAC address is the hardware serial number of the network interface and can be found in the **Network Configuration Report**.

For using SetIP program, disable the computer firewall before continuing by performing the following:

1. Open **Start** > **Control Panel**.
2. Double click **Security Center**.
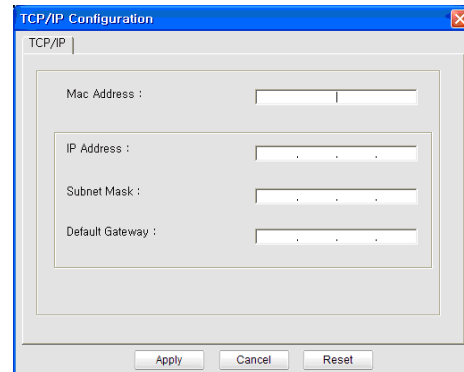3. Click **Firewall**.
4. Disable the firewall.

Installing the program

1. Insert the Printer Software CD-ROM provided with your machine. When the driver CD runs automatically, close that window.
2. Start Windows Explorer and open the X drive. (X represents your CD-ROM drive.)
3. Double-click **Application** > **SetIP**.
4. Double-click **Setup.exe** to install this program.
5. Click **OK**. If necessary, select a language from the drop-down list.
6. Follow the instructions in the window and complete the installation.

Starting the program

1. Connect your machine to the network with a network cable.
2. Turned on the machine.
3. From the Windows **Start** menu, select **All Programs** > **Samsung Printers** > **SetIP** > **SetIP**.
4. Click on the ⚙ icon (third from left) in the SetIP window to open the TCP/IP configuration window.

5. Enter the machine's new information into the configuration window as follows. In a corporate intranet, you may need to have this information assigned by a network manager before proceeding.

- **MAC Address**: Find the machine's MAC address from the **Network Configuration Report** and enter it without the colons. For example, 00:15:99:29:51:A8 becomes 0015992951A8.
- **IP Address**: Enter a new IP address for your printer.
  For example, if your computer's IP address is 192.168.1.150, enter 192.168.1.X. (X is number between 1 and 254 other than the computer's address.)
- **Subnet Mask**: Enter a Subnet Mask.
- **Default Gateway**: Enter a Default Gateway.
6. Click **Apply**, and then click **OK**. The machine will automatically print the **Network Configuration Report**. Confirm that all the settings are correct.
7. Click **Exit** to close the SetIP program.
8. If necessary, restart the computer's firewall.

IPv4 setting using SetIP Program (Macintosh)

For using SetIP program, disable the computer firewall before continuing by performing the following:

> 📝 The path and UIs may differ by Mac OS version. Refer to the Mac OS manual.

1. Open **System Preferences**.
2. Click **Security**.
3. Click the **Firewall** menu.
4. Turn firewall off.

> 📝 The following instructions may vary for your model.

1. Connect your machine to the network with a network cable.
2. Insert the Installation CD-ROM, and open the disk window, select **MAC_Installer** > **MAC_Printer** > **SetIP** > **SetIPApplet.html**.
3. Double click the file and **Safari** will automatically open, then select **Trust**. The browser will open the **SetIPApplet.html** page that shows the printer's name and IP address information.
4. Click on the ⚙ icon (third from left) in the SetIP window to open the TCP/IP configuration window.
5. Enter the machine's new information into the configuration window as follows. In a corporate intranet, you may need to have this information assigned by a network manager before proceeding.
   - **MAC Address**: Find the machine's MAC address from the **Network Configuration Report** and enter it without the colons.

For example, 00:15:99:29:51:A8 becomes 0015992951A8.
- **IP Address**: Enter a new IP address for your printer.

  For example, if your computer's IP address is 192.168.1.150, enter 192.168.1.X. (X is number between 1 and 254 other than the computer's address.)
- **Subnet Mask**: Enter a Subnet Mask.
- **Default Gateway**: Enter a Default Gateway.

6. Select **Apply**, then **OK**, and **OK** again. The printer will automatically print the configuration report. Confirm that all the settings are correct. **Quit Safari**. You may close and eject the installation CD-ROM. If necessary, restart the computer's firewall. You have successfully changed the IP address, subnet mask, and gateway.

IPv4 setting using SetIP Program (Linux)

SetIP program should be automatically installed during the printer driver installation.

> The path and UIs may differ by Linux OS version. Refer to the Linux OS manual to turn firewall off.

1. Print the machine's network configuration report to find your machine's MAC address.
2. Open the /**opt**/**Samsung**/**mfp**/**share**/**utils**/.
3. Double click the **SetIPApplet.html** file.
4. Click to open the TCP/IP configuration window.
5. Enter the network card's MAC address, IP address, subnet mask, default gateway, and then click **Apply**.

> When you enter the MAC address, enter it without a colon(:).

6. The machine prints the network configuration report. Confirm all the settings are correct.
7. Close the SetIP program.

IPv6 configuration

> ⚠ **TCP/IPv6** is supported properly only in Windows Vista or higher.

> If the IPv6 network seems to not be working, set all the network setting to the factory defaults and try again (See "Restoring factory default settings using SyncThru™ Web Service" on page 33).

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

The machine is provided with IPv6 feature on.

1. Connect your machine to the network with a network cable.
2. Turn on the machine.
3. Print a **Network Configuration Report** from the machine's control panel that will check IPv6 addresses.
4. Select **Start** > **Control Panel** > **Hardware and Sound** > **Printers** > **Add Printer**.
5. Click **Add a local printer** on the **Add Printer** windows.
6. Follow the instruction on the window.

> If the machine does not work in the network environment, activate IPv6. Refer to the next section followed by.

Printing network configuration report

You can print a **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 and troubleshooting problems.

To print the report:

In ready mode, press and hold the ⊚ (cancel button) for about 5 seconds. You can find your machine's MAC address and IP address. For example:
- MAC Address: 00:15:99:41:A2:78
- IP Address: 192.0.0.192

Setting IPv6 addresses

Machine supports 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.

Manual address configuration

1. Start a web browser such as Internet Explorer that supports IPv6 addressing as a URL (See "SyncThru™ Web Service" on page 30).

> For IPv4, enter the IPv4 address (http://xxx.xxx.xxx.xxx) in the address field and press the Enter key or click **Go**.

2. When the **SyncThru™ Web Service** window opens, click **Network Settings**.
3. Click **TCP/IPv6**.
4. Enable the **Manual Address** In the **TCP/IPv6** section.
5. Select the **Address/Prefix** and click the **Add** button, then the router prefix will automatically be entered into the address field.

   Enter the rest of address. (ex: 3FFE:10:88:194::**AAAA**. "A" is the hexadecimal 0 through 9, A through F.)
6. Click the **Apply** button.

Installing printer driver

Driver installation for network printer in IPv6 network environment is same as TCP/IPv4 (See "Installing network connected machine's driver" on page 33).

Select TCP/IP Port and when the list of machines are displayed, simply select your machine's IPv6 address.

Using SyncThru™ Web Service

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**.
3. Enter the IPv6 addresses. (ex: http://[FE80::215:99FF:FE66:7701])

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

Restoring factory default settings using SyncThru™ Web Service

1. Start a web browser such as Internet Explorer, Safari or Firefox and enter your machine's new IP address in the browser window.

   For example,

   http://192.168.1.133/

2. Click **Go** to access the SyncThru™ Web Service.
3. Click **Login** on the upper right of the SyncThru™ Web Service website.

A log-in page appears.

4. Type in the **ID** and **Password** then click **Login**.

If it's your first time logging into SyncThru™ Web Service, type in the below default ID and password.

- **ID: admin**
- **Password: sec00000**

5. When the **SyncThru™ Web Service** window opens, click **Settings** > **Network Settings** > **Restore Default**.

6. Click **Clear** for network.

7. Turn off and restart machine to apply settings.

INSTALLING NETWORK CONNECTED MACHINE'S DRIVER

You must install the printer driver software for printing. The software includes drivers, applications, and other user friendly programs.

Make sure that the network setup for your machine is completed. All applications should be closed on your computer before beginning installation.

Windows

This is recommended for most users. All components necessary for machine operations will be installed.

Follow the steps below:

1. Make sure that the machine is connected to the network and powered on.

2. Insert the supplied software CD into your CD-ROM drive.

- The software CD should automatically run and an installation window 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 Server 2008 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 Server 2008 R2, click **Run Setup.exe** in **Install or run program** field, and click **Continue** or **Yes** in the **User Account Control** window.
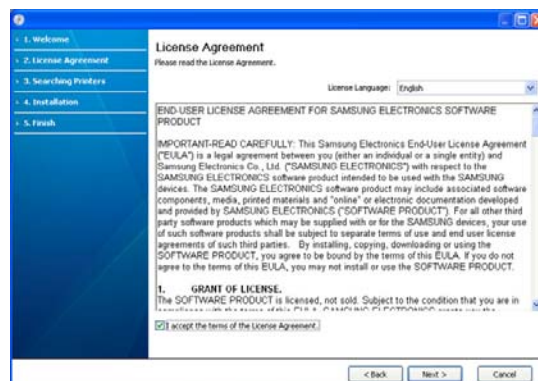
3. Select **Install now**.

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

- For CLP-325W(K) installation window, you can access **Wireless Setting and Installation** menu. The **Wireless Setting and Installation** allows you to install a wireless network to connect to the machine with USB cable (See "Setting a wireless network with USB cable" on page 38).

- The **Advanced Installation** has two options, **Custom Installation** and **Install Software Only**. The Custom Installation allows you to select the machine's connection and choose individual component to install. The **Install Software Only** allows you to install the supplied software such as Smart Panel. Follow the guide in the window.
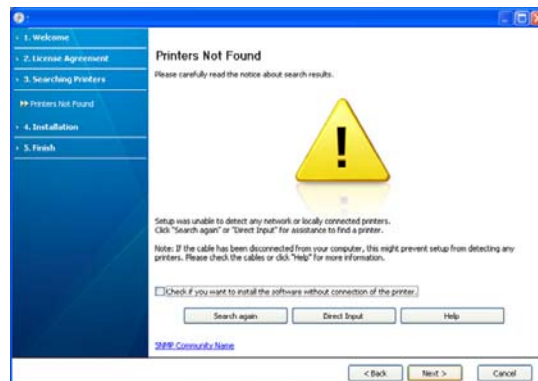
4. Read **License Agreement**, and select **I accept the terms of the License Agreement**. Then, click **Next**.

The program searches the machine.

If your machine is not found in the network or locally, the following window will appear.

- **Check if you want to install the software without connection of the printer.**
  - Check this option to install this program without a machine connected. In this case, the print a test page window will be skipped, and completes the installation.
- **Search again**

When you press this button, the firewall notice window appears;

- Turn off the firewall and **Search again**. For Window operating system, click **Start** > **Control Panel** > **Windows Firewall**, and inactivate this option. For other operating system, refer to its on-line guide.
- Turn off the firewall from the third party's program beside the operating system. Refer to the manual provided by individual programs.
- **Direct Input**

  The **Direct Input** allows you to search a specific machine on the network.
  - **Search by IP address**: Enter the IP address or the host name. Then click **Next**.

    To verify your machine's IP address, print a network configuration report (See "Printing a machine report" on page 69).
  - **Search by network path**: To find a shared machine (UNC Path), enter the shared name manually or find a shared printer by clicking the **Browse** button. Then click **Next**.
- **Help**

  If your machine is not connected to the computer or network, This help button gives you the 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 driver 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 website, click **On-line Registration**.

   > If your machine is not connected yet to the computer, click **How to connect?**. **How to connect?** gives detailed information about how to connect the machine. Follow the instructions in the window.

9. Click **Finish**.

   > - After the driver setup, you may enable firewall.
   > - If the printer driver does not work properly, follow the steps below to repair or reinstall the driver.
   >   a) Make sure that the machine is connected to your machine and powered on.
   >   b) From the **Start** menu, select **Programs** or **All Programs** > **Samsung Printers** > **your printer driver name** > **Maintenance**.
   >   c) Select the option as you wish, follow the instruction on the window.

Macintosh

1. Make sure that the machine is connected to your network and powered on. Also, your machine's IP address should have been set.
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. The Samsung Installer window opens. Click **Continue**.
11. 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.
12. The message which warns that all applications will close on your computer appears. Click **Continue**.

    > - If a window asking you to select an installation type appears, select **Typical installation for a network printer** and then click **OK**.
    > - If you select **Typical installation for a network printer**, the SetIP program automatically runs. If the machine has already configured network information, close the SetIP program. Go to the next step.

13. After the installation is finished, click **Quit**.
14. 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**.
15. Click **Add** on the **Printer List**.
    - For Mac OS X 10.5~10.6, click the "**+**" icon; a display window will pop-up.
16. For Mac OS X 10.3, select the **IP Printing** tab.
    - For Mac OS X 10.4, click **IP Printer**.
    - For Mac OS X 10.5~10.6, click **IP**.
17. Select **Socket/HP Jet Direct** in **Printer Type**.

    > When printing a document containing many pages, printing performance may be enhanced by choosing **Socket** for **Printer Type** option.

18. Enter the machine's IP address in the **Printer Address** field.
19. Enter the queue name in the **Queue Name** field. If you cannot determine the queue name for your machine server, try using the default queue first.
20. 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.

21. 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

Install Linux Driver

1. Make sure that the machine is connected to your network and powered on. Also, your machine's IP address should have been set.
2. From the Samsung website, download the Unified Linux Driver package to your computer.
3. Right-click the **Unified Linux Driver** package and extract the package.
4. Double click **cdroot** > **autorun**.
5. The Samsung Installer window opens. Click **Continue**.
6. The Add printer wizard window opens. Click **Next**.
7. Select Network printer and click **Search** button.
8. The Printer's IP address and model name appears on list field.
9. Select your machine and click **Next**.
10. Input the printer description and **Next**
11. When the add printer is done, click **Finish**.
12. When the install is done, click **Finish**.

Add network Printer

1. Double-click the **Unified Driver Configurator**.
2. Click **Add Printer…**
3. The **Add printer wizard** window opens. Click **Next**.
4. Select **Network printer** and click the **Search** button.
5. The printer's IP address and model name appears on list field.
6. Select your machine and click **Next**.
7. Input the printer description and **Next**
8. When the add printer is done, click **Finish**.

wireless network setup (clp-325w(k) only)

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

This chapter includes:

- Using a wireless network with WPS button on the control panel
- Using a wireless network from the computer
- Setting a wireless network with USB cable

- Setting a wireless network with network cable
- Completing the installation
- Troubleshooting

  1. Press the **WPS** ( ) button on the control panel for less than two seconds.
     - : The light blinks slowly on wireless LED. The machine starts connecting to the wireless network. The LED blinks slowly for up to two minutes until you press the PBC button on access point (or wireless router).
  2. : Press the WPS (PBC) button on the access point (or wireless router).
     - : The light blinks fast on the wireless LED. The machine is connecting to the access point (or wireless router).
     - : When the machine is successfully connected to the wireless network, the wireless LED light stays on.
     - The resulting report is automatically printed out.

> For more information about the network environment, network programs, and installing network connected machine's driver, refer to the following chapters.
>   - See "Network environment" on page 30.
>   - See "Introducing useful network programs" on page 30.
>   - See "Installing network connected machine's driver" on page 33.

USING A WIRELESS NETWORK WITH WPS BUTTON ON THE CONTROL PANEL

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

Items to prepare

You need to ensure you have the following items ready to use:
- Check if the access point (or wireless router) supports Wi-Fi Protected Setup™(WPS).
- Check if your machine supports Wi-Fi Protected Setup™(WPS).

Choosing your network connection

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

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

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

The **PBC** mode is recommended for a typical wireless network environment.

> Access point (or wireless router) that supports WPS (Wi-Fi Protected Setup™) has the symbol shown below.
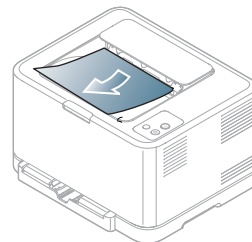

Setting a wireless network

Connecting to a wireless network in PBC mode

To connect your machine to a wireless network, follow the following steps:

You need to check the status of the wireless LED.

> If your machine fails to connect to the wireless network, the wireless LED is off, and the error report is automatically printed out. Try again to connect to the wireless network after solving the connection problem.

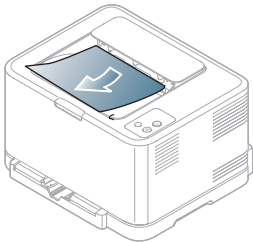### Connecting to the wireless network in PIN mode

To connect your machine to the wireless network, follow the following steps:

You need to check the status of the wireless LED.

1. Press and hold the **WPS**〈 〉 button on the control panel for more than two seconds.
   • The report including PIN number is automatically printed out.

   • ⟨symbol⟩ **:** The light blinks slowly on the wireless LED. The machine starts connecting to access point (or wireless router).

2. You need to enter eight-digit PIN number within two minutes to the computer which is connected to the access point (or wireless router). The LED blinks slowly for up to two minutes until you enter the eight-digit PIN number

   • ⟨symbol⟩ **:** The light blinks fast on the wireless LED. The machine is connecting to the access point (or wireless router). When the machine is successfully connected to the wireless network, the wireless LED light stays on.

   • ⟨symbol⟩ **:** The resulting report is automatically printed out.

   > If your machine fails to connect to the wireless network, the wireless LED is off, and the error report is automatically printed out. Try again to connect to the wireless network after solving the connection problem.

Re-connecting to the wireless network

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

> In the following cases, the machine automatically re-connects to the wireless network:
> • The machine is turned off and on again.
> • The WLAN is turned off and on again.
> • The access point (or wireless router) is turned off and on again.
> • If there is no previously used access point (or wireless router), or the network settings have been changed.

Canceling a wireless network connection process

To cancel the wireless network connection function when the machine is connecting to the wireless network, press the **WPS** ( ) button on the control panel again. The wireless LED is off. The **Wait 2 minutes for Reconnecting** message is to be automatically printed out.

Disconnecting a wireless network connection

To disconnect the wireless network connection, press the **WPS** ( ) button on the control panel again.
• **When the Wi-Fi Network is in idle mode:** The machine is immediately disconnected from the wireless network, and the wireless LED is off.
• **When the Wi-Fi Network is being used:** While the machine waits until the current job is finished, the light blinks fast on the wireless LED. Then, the wireless network connection is automatically disconnected. The wireless LED is off.

USING A WIRELESS NETWORK FROM THE COMPUTER

Choosing your network connection

Typically, you can only have one connection between your computer and the machine at a time. There are types of network connections to consider.
• Wireless network without access point (Ad-Hoc mode)
• Wireless network with an access point (Infrastructure mode)

How to print a network configuration report

You can identify the network settings of your machine by printing a network configuration report.
To print the report:
In ready mode, press and hold the **Cancel** button for about 5 seconds. You can find your machine's MAC address and IP address.
For example:
• MAC Address: 00:15:99:41:A2:78
• IP Address: 192.0.0.192

IP addresses

Every device in a network has a unique numerical address called an **IP Address**. Your machine came with a Default IP address of 192.0.0.192, which you can verify by printing out a **Network Configuration Report** or **Configuration Report**.
• **DHCP IP assignment**: Connect your machine to the network, and wait a few minutes for the DHCP server to assign an IP address to the machine. Then, print the **Network Configuration Report** as explained above. If the report shows that the IP address has changed, the assignment was successful. You will see the new IP address in the report.
• **Static IP assignment**: Use the SetIP program to change the IP address from your computer (See "Setting IP address" on page 31).
In an office environment, we recommend that you contact a network administrator to set this address for you.

Wireless network name and network key

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

	Infrastructure mode This is an environment generally used for homes and SOHOs. This mode uses an access point to communicate with the wireless machine. • See "Installing the machine on a wireless network with an access point (Windows)" on page 38. • See "Installing the machine on a wireless network with an access point (Macintosh)" on page 41.
	Ad-Hoc mode This mode does not use an access point. The wireless computer and wireless machine communicates directly. • See "Installing the machine on an Ad-Hoc wireless network (Windows)" on page 39. • See "Installing the machine on an Ad-Hoc wireless network (Macintosh)" on page 42.

> After choosing your configuration, follow the simple directions for your computer operating system, but first locate the software CD supplied with the machine before proceeding.

Installing a wireless network with cables

You can install a wireless network to connect to the machine with either a USB cable or a network cable. For most users, we recommend using a USB cable with the program provided in the supplied software CD.

The following are two ways to install a wireless network with cables.

• **With a USB cable:** You can simply set up a wireless network using the program in the supplied software CD. Only Windows and Macintosh operating system are supported (See "Setting a wireless network with USB cable" on page 38).

> You can also install a wireless network in Printer Settings Utility with USB cable after installing driver. (Windows and Macintosh operating system are supported.)

• **With a network cable:** You can set up a wireless network using the SyncThru™ Web Service program (See "Setting a wireless network with network cable" on page 43).

SETTING A WIRELESS NETWORK WITH USB CABLE

> Refer to your network administrator, or the person that set up your wireless network, for information about your network configuration.

Installing the machine on a wireless network with an access point (Windows)
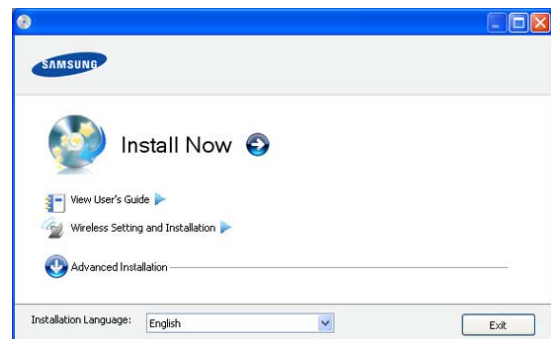
Items to prepare

Ensure you have next items ready.
• Access point
• Network-connected computer
• Software CD that provided with your machine
• The machine installed with a wireless network interface
• USB cable

Creating the infrastructure network in Windows

When the items are ready, follow below steps:

1. Check whether the USB cable is connected to the machine.
2. Turn on your computer, access point and machine.
3. Insert the supplied software CD into your CD-ROM drive.
   • The software CD should automatically run and an installation window appears.
   • 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 or Windows Server 2008 R2 click **Start** > **All programs** > **Accessories** > **Run**.
     Type X:**Setup.exe** replacing "X" with the letter which represents your CD-ROM and click **OK**.
   • If the **AutoPlay** window appears in Windows Vista, Windows 7 or Windows Server 2008 R2, click **Run Setup.exe** in **Install or run program** field, and click **Continue** or **Yes** in the **User Account Control** window.
4. Select the **Wireless Setting and Installation** option.

   • **Install Now:** If you have set the wireless network, click this button to install the printer driver to use the wireless network machine. If you have not set the wireless network, click **Wireless Setting and Installation** button to set the wireless network before you click this button.
   • **Wireless Setting and Installation:** Configure the wireless network settings of your printer with a USB cable then install the printer driver. Only for the users who have not set up the wireless connection before.
5. Read **License Agreement**, and select **I accept the terms of the License Agreement**. Then, click **Next**.
6. The software searches the wireless network.

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

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

> If you cannot find out the network name you want to choose, or if you want to set the wireless configuration manually, click **Advanced Setting**.
> • **Enter the wireless Network Name:** Type the SSID of access point you want (SSID is case-sensitive).
> • **Operation Mode:** Select **Infrastructure**.

- **Authentication:** Select an authentication type.

   Open System: Authentication is not used, and encryption may or may not be used, depending on the need for data security.

   Shared Key: Authentication is used. A device that has a proper WEP key can access the network.

   WPA Personal or WPA2 Personal: Select this option to authenticate the print server based on WPA Pre-Shared Key. This uses a shared secret key (generally called Pre Shared Key pass phrase) which is manually configured on the access point and each of its clients.
- **Encryption:** Select the encryption. (None, WEP64, WEP128, TKIP, AES, TKIP AES)
- **Network Key:** Enter the encryption network key value.
- **Confirm Network Key:** Confirm the encryption network key value.
- **WEP Key Index:** If you are using the WEP Encryption, select the appropriate **WEP Key Index**.

The wireless network security window does appear when the access point has security setting.

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

- **In case of WEP**

   Select **Open System** or **Shared Key** for the authentication and enter WEP security key. Click **Next**.

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

- **In case of WPA**

   Enter the WPA shared key and click **Next**.

   WPA authorizes and identifies users based on a secret key that changes automatically at regular intervals. WPA also uses TKIP (Temporal Key Integrity Protocol) and AES (Advanced Encryption Standard) for data encryption.

8. The window shows the wireless network setting and check if settings are right. Click **Next**.
   - **For the DHCP method**

      If the IP address assignment method is DHCP, check if DHCP is shown in the window. However, if it shows Static, click **Change TCP/IP** to change the assignment method to DHCP.
   - **For the Static method**

      If the IP address assignment method is Static, check if Static is shown in the window. However, if it shows DHCP, click **Change TCP/IP** to enter the IP address and other network configuration values for the machine. Before entering the IP address for the machine, you must know the computer's network configuration information. If the computer is set to DHCP, you must contact the network administrator to get the static IP address.

      Example)

      If computer's network information is as below:
      - IP address: 169.254.133.42
      - Subnet Mask: 255.255.0.0

      Machine's network information should be as below:
      - IP address: 169.254.133. 43 (Use computer's IP address, with changed last three digits.)
      - Subnet Mask: 255.255.0.0 (Use the computer's subnet

mask.)
      - Gateway: 169.254.133.1 (Change the last three digits from IP address of your machine to 1.)

9. When the wireless network setting is completed, disconnect the USB cable between the computer and machine. Click **Next**.
10. The **Wireless Network Setting Complete** window appears.

   Select **Yes** if you accept the current settings and continue the setup procedure.

   Select **No** if you want to return to the beginning screen.

   Then, click **Next**.
11. Click **Next** when the **Confirm Printer Connection** window appears.
12. Select the components to be installed. Click **Next**.

   After selecting the components, you can also change the machine name, set the machine to be shared on the network, set the machine as the default machine, and change the port name of each machine. Click **Next**.
13. After the installation is finished, a window asking you to print a test page appears. If you want to print a test page, click **Print a test page**.

   Otherwise, just click **Next** and go to step 15.
14. If the test page prints out correctly, click **Yes**.

   If not, click **No** to reprint it.
15. To register as a user of the machine in order to receive information from Samsung, click **On-line Registration**.
16. Click **Finish**.

Installing the machine on an Ad-Hoc wireless network (Windows)

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

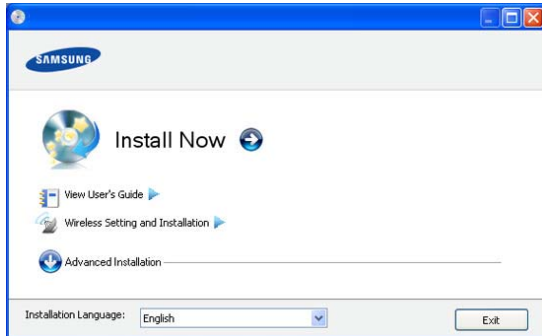### Items to prepare

Ensure you have next items ready.
- Network-connected computer
- Software CD that provided with your machine
- The machine installed with a wireless network interface
- USB cable

Creating the Ad-Hoc network in Windows

When the items are ready, follow below steps:
1. Check whether the USB cable is connected to the machine.
2. Turn on your computer and the wireless network machine.
3. Insert the supplied software CD into your CD-ROM drive.
   - The software CD should automatically run and an installation window 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 drive. Click **OK**.
   - If you use Windows Vista, Windows 7 or Windows Server 2008 R2 click **Start** > **All programs** > **Accessories** > **Run**.

      Type X:**Setup.exe** replacing "X" with the letter which represents your drive and click **OK**.
   - If the **AutoPlay** window appears in Windows Vista, Windows 7 or Windows Server 2008 R2, click **Run Setup.exe** in **Install or run program** field, and click **Continue** or **Yes** in the **User Account Control** window.

4. Select the **Wireless Setting and Installation** option.

- **Install Now:** If you have set the wireless network, click this button to install the printer driver to use the wireless network machine. If you have not set the wireless network, click **Wireless Setting and Installation** button to set the wireless network before you click this button.
- **Wireless Setting and Installation:** Configure the wireless network settings of your printer with a USB cable then install the printer driver. Only for the users who have not set up the wireless connection before.

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

6. The software searches the wireless network.

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

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

If you want to use the Samsung default ad-hoc setting, select the last wireless network on the list, which **Network Name(SSID)** is **airportthru** and **Signal** is **Printer Self Network**.

Then, click **Next**.

If you want to use other ad-hoc settings, select other wireless network from the list.

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

select the appropriate **WEP Key Index**.

> 📝 The wireless network security window appears when the ad-hoc network has security setting.
> The wireless network security window appears. Select **Open System** or **Shared Key** for the authentication and click **Next**.
> - WEP (Wired Equivalent Privacy) is a security protocol preventing unauthorized access to your wireless network. WEP encrypts the data portion of each packet exchanged on a wireless network using a 64-bit or 128-bit WEP encryption key.

8. The window which shows the wireless network setting appears. Check the settings and click **Next**.

> 📝 Before entering the IP address for the machine, you must know the computer's network configuration information. If the computer's network configuration is set to DHCP, the wireless network setting should also be DHCP. Likewise, if the computer's network configuration is set to Static, the wireless network setting should also be Static.
> If your computer is set to DHCP and you want to use Static wireless network setting, you must contact the network administrator to get the static IP address.
> - **For the DHCP method**
>   If the IP address assignment method is DHCP, check if DHCP is shown in the **Wireless Network Setting Confirm** window. However, if it shows Static, click **Change TCP/IP** to change the assignment method to **Receive IP address automatically (DHCP)**.
> - **For the Static method**
>   If the IP address assignment method is Static, check if Static is shown in the **Wireless Network Setting Confirm** window. However, if it shows DHCP, click **Change TCP/IP** to enter the IP address and other network configuration values for the machine.
>   Example)
>   If computer's network information is as below:
>   - IP address: 169.254.133.42
>   - Subnet Mask: 255.255.0.0
>   Machine's network information should be as below:
>   - IP address: 169.254.133. 43 (Use computer's IP address, with changed last three digits.)
>   - Subnet Mask: 255.255.0.0 (Use the computer's subnet mask.)
>   - Gateway: 169.254.133.1 (Change the last three digits from IP address of your machine to 1.)

9. When the wireless network setting is completed, disconnect the USB cable between the computer and machine. Click **Next**.

> 📝 If the **Change PC Network Setting** window appears, follow the steps on the window.
> Click **Next** if you are finished the computer's wireless network settings.
> If you set the computer's wireless network as DHCP, it will take several minutes to receive the IP address.

10. The **Wireless Network Setting Complete** window appears.

Select **Yes** if you accept the current settings and continue the setup procedure.

Select **No** if you want to return to the beginning screen.

Then, click **Next**.

11. Click **Next** when the **Confirm Printer Connection** window appears.

12. Select the components to be installed. Click **Next**.

After selecting the components, you can also change the machine name, set the machine to be shared on the network, set the machine as the default machine, and change the port name of each machine. Click **Next**.

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

Otherwise, just click **Next** and go to step 15.

14. If the test page prints out correctly, click **Yes**.

If not, click **No** to reprint it.

15. To register as a user of the machine in order to receive information from Samsung, click **On-line Registration**.

16. Click **Finish**.

Installing the machine on a wireless network with an access point (Macintosh)

Items to prepare

Ensure you have next items ready.
- Access point
- Network-connected computer
- Software CD that provided with your machine
- The machine installed with a wireless network interface
- USB cable

Creating the infrastructure network in Macintosh

When the items are ready, follow below steps:

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

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

3. Insert the supplied software CD into your CD-ROM drive.

4. Double-click the CD-ROM icon that appears on your Macintosh desktop.

5. Double-click the **MAC_Installer** folder.

6. Double-click the **Installer OS X** icon.

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

8. The Samsung Installer window opens. Click **Continue**.

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

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

11. The Samsung Installer window opens. Click **Continue**.

12. Select **Easy Install** and click **Install**. **Easy Install** is recommended for most users. All compoenets necessary for machine operations will be installed.

If you select **Custom Install**, you can choose individual operations will be installed.

13. Select the **Wireless Setting and Installation** option.

14. The software searches the wireless network.

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

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

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

- **Enter the wireless Network Name:** Type the SSID of access point you want (SSID is case-sensitive).
- **Operation Mode:** Select **Infrastructure**.
- **Authentication:** Select an authentication type.

  Open System: Authentication is not used, and encryption may or may not be used, depending on the need for data security.

  Shared Key: Authentication is used. A device that has a proper WEP key can access the network.

  WPA Personal or WPA2 Personal: Select this option to authenticate the print server based on WPA Pre-Shared Key. This uses a shared secret key (generally called Pre Shared Key pass phrase) which is manually configured on the access point and each of its clients.
- **Encryption:** Select the encryption. (None, WEP64, WEP128, TKIP, AES, TKIP AES)
- **Network Key:** Enter the encryption network key value.
- **Confirm Network Key:** Confirm the encryption network key value.
- **WEP Key Index:** If you are using the WEP Encryption, select the appropriate **WEP Key Index**.

The wireless network security window does appear when the access point has security setting.

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

- **In case of WEP**

  Select **Open System** or **Shared Key** for the authentication and enter WEP security key. Click **Next**.

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

- **In case of WPA**

  Enter the WPA shared key and click **Next**.

  WPA authorizes and identifies users based on a secret key that changes automatically at regular intervals. WPA also uses TKIP (Temporal Key Integrity Protocol) and AES (Advanced Encryption Standard) for data encryption.

16. The window shows the wireless network setting and check if settings are right. Click **Next**.

- **For the DHCP method**

  If the IP address assignment method is DHCP, check if DHCP is shown in the window. However, if it shows Static, click **Change TCP/IP** to change the assignment method to DHCP.

- **For the Static method**

  If the IP address assignment method is Static, check if Static is shown in the window. However, if it shows DHCP, click **Change TCP/IP** to enter the IP address and other network configuration values for the machine. Before entering the IP address for the machine, you must know the computer's network configuration information. If the computer is set to DHCP, you must contact the network administrator to get the static IP address.

  Example)

  If computer's network information is as below:
  - IP address: 169.254.133.42
  - Subnet Mask: 255.255.0.0

  Machine's network information should be as below:

- IP address: 169.254.133. 43 (Use computer's IP address, with changed last three digits.)
- Subnet Mask: 255.255.0.0 (Use the computer's subnet mask.)
- Gateway: 169.254.133.1 (Change the last three digits from IP address of your machine to 1.)

17. The wireless network is connecting according to the network configuration.
18. When the wireless network setting is completed, disconnect the USB cable between the computer and machine.
19. After the installation is finished, click **Quit**.

Installing the machine on an Ad-Hoc wireless network (Macintosh)

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

Items to prepare

Ensure you have next items ready.
- Network-connected computer
- Software CD that provided with your machine
- The machine installed with a wireless network interface
- USB cable

Creating the Ad-Hoc network in Macintosh

When the items are ready, follow below steps:

1. Check whether the USB cable is connected to the machine.
2. Turn on your computer and machine.
3. Insert the supplied software CD into your CD-ROM drive.
4. Double-click the CD-ROM icon that appears on your Macintosh desktop.
5. Double-click the **MAC_Installer** folder.
6. Double-click the **Installer OS X** icon.
7. Enter the password and click **OK**.
8. The Samsung Installer window opens. Click **Continue**.
9. Read the license agreement and click **Continue**.
10. Click **Agree** to agree to the license agreement.
11. Select **Easy Install** and click **Install**. **Easy Install** is recommended for most users. All compoenets necessary for machine operations will be installed.

    If you select **Custom Install**, you can choose individual operations will be installed.
12. Click **Wireless Setting and Installation**.
13. The software searches the wireless network devices.

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

14. After searching the wireless network, a list of wireless network your machine has searched appears.

    If you want to use the Samsung default ad-hoc setting, select the last wireless network on the list, which **Network Name(SSID)** is **airportthru** and **Signal** is **Printer Self Network**.

    Then, click **Next**.

    If you want to use other ad-hoc settings, select other wireless network from the list.

🗹 If you want to change ad-hoc settings click the **Advanced Setting** button.
- **Enter the wireless Network Name:** Type in the SSID name you want (SSID is case-sensitive).
- **Operation Mode:** Select **Ad-hoc**.
- **Channel:** Select the channel. (**Auto Setting** or 2412 MHz to 2467 MHz).
- **Authentication:** Select an authentication type.

  Open System: Authentication is not used, and encryption may or may not be used, depending on the need for data security.

  Shared Key: Authentication is used. A device that has a proper WEP key can access the network.
- **Encryption:** Select the encryption. (None, WEP64, WEP128)
- **Network Key:** Enter the encryption network key value.
- **Confirm Network Key:** Confirm the encryption network key value.
- **WEP Key Index:** If you are using the WEP Encryption, select the appropriate **WEP Key Index**.

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

The wireless network security window appears. Select **Open System** or **Shared Key** for the authentication and click **Next**.
- WEP (Wired Equivalent Privacy) is a security protocol preventing unauthorized access to your wireless network. WEP encrypts the data portion of each packet exchanged on a wireless network using a 64-bit or 128-bit WEP encryption key.

15. The window which shows the wireless network setting appears. Check the settings and click **Next**.

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

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

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

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

  Example)

  If computer's network information is as below:
  - IP address: 169.254.133.42
  - Subnet Mask: 255.255.0.0

  Machine's network information should be as below:

- IP address: 169.254.133. 43 (Use computer's IP address, with changed last three digits.)
- Subnet Mask: 255.255.0.0 (Use the computer's subnet mask.)
- Gateway: 169.254.133.1 (Change the last three digits from IP address of your machine to 1.)

16. The wireless network is connecting according to the network configuration.

17. When the wireless network setting is completed, disconnect the USB cable between the computer and machine.

18. After the installation is finished, click **Quit**.

SETTING A WIRELESS NETWORK WITH NETWORK CABLE

Your machine is a network compatible machine. To enable your machine to work with your network you will need to perform some configuration procedures.

Refer to your network administrator, or the person that set up your wireless network, for information about your network configuration.

Preparing items

Ensure you have next items ready.
- Access point
- Network-connected computer
- Software CD that provided with your machine
- The machine installed with a wireless network interface
- Network cable

Setting IP address

Firstly, 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.

In a few situations the IP address must be set manually. This is called a static IP and is often required in corporate Intranets for security reasons.
- **DHCP IP assignment**: Connect your machine to the network, and wait a few minutes for the DHCP server to assign an IP address to the machine. Then, print the **Network Configuration Report** as explained above. If the report shows that the IP address has changed, the assignment was successful. You will see the new IP address in the report (See "How to print a network configuration report" on page 37).
- **Static IP assignment**: Use SetIP program to change the IP address from your computer.

In an office environment, we recommend that you contact a network administrator to set this address for you.

IP setting using SetIP Program (Windows)

This program is for manually setting the network IP address of your machine using its MAC address to communicate with the machine. A MAC address is the hardware serial number of the network interface and can be found in the **Network Configuration Report**.

For using SetIP program, disable the computer firewall before continuing by performing the following:
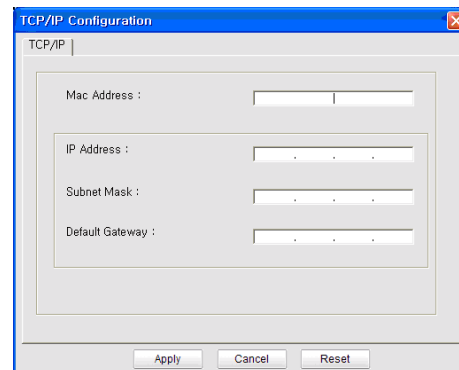
1. Open **Start** > **All programs** > **Control Panel**.
2. Double click **Security Center**.
3. Click **Windows Firewall**.
4. Disable the firewall.

Installing the program

1. Insert the Printer Software CD-ROM provided with your machine. When the driver CD runs automatically, close that window.
2. Start Windows Explorer and open the X drive. (X represents your CD-ROM drive.)
3. Double-click **Application** > **SetIP**.
4. Double-click **Setup.exe** to install this program.
5. Click **OK**. If necessary, select a language from the drop-down list.
6. Follow the instructions in the window and complete the installation.

Starting the program

1. Connect your machine to the network with a network cable.
2. Turned on the machine.
3. From the Windows **Start** menu, select **All Programs** > **Samsung Printers** > **SetIP** > **SetIP**.
4. Click on the ⚙ icon (third from left) in the SetIP window to open the TCP/IP configuration window.
5. Enter the machine's new information into the configuration window as follows. In a corporate intranet, you may need to have this information assigned by a network manager before proceeding.

- **MAC Address**: Find the machine's MAC address from the **Network Configuration Report** and enter it without the colons. For example, 00:15:99:29:51:A8 becomes 0015992951A8.
- **IP Address**: Enter a new IP address for your printer.
  For example, if your computer's IP address is 192.168.1.150, enter 192.168.1.X. (X is number between 1 and 254 other than the computer's address.)
- **Subnet Mask**: Enter a Subnet Mask.
- **Default Gateway**: Enter a Default Gateway.

6. Click **Apply**, and then click **OK**. The machine will automatically print the **Network Configuration Report**. Confirm that all the settings are correct.
7. Click **Exit** to close the SetIP program.
8. If necessary, restart the computer's firewall.

IP setting using SetIP Program (Macintosh)

For using SetIP program, disable the computer firewall before continuing by performing the following:

The path and UIs may differ by Mac OS version. Refer to the Mac OS manual.

1. Open **System Preferences**.
2. Click **Security**.

3. Click the **Firewall** menu.

4. Turn firewall off.

📝 The following instructions may vary for your model.

1. Connect your machine to the network with a network cable.

2. Insert the Installation CD-ROM, and open the disk window, select **MAC_Installer** > **MAC_Printer** > **SetIP** > **SetIPApplet.html**.

3. Double click the file and **Safari** will automatically open, then select **Trust**. The browser will open the **SetIPApplet.html** page that shows the printer's name and IP address information.

4. Click on the ⚙ icon (third from left) in the SetIP window to open the TCP/IP configuration window.

5. Enter the machine's new information into the configuration window as follows. In a corporate intranet, you may need to have this information assigned by a network manager before proceeding.
   • **MAC Address**: Find the machine's MAC address from the **Network Configuration Report** and enter it without the colons. For example, 00:15:99:29:51:A8 becomes 0015992951A8.
   • **IP Address**: Enter a new IP address for your printer.
     For example, if your computer's IP address is 192.168.1.150, enter 192.168.1.X. (X is number between 1 and 254 other than the computer's address.)
   • **Subnet Mask**: Enter a Subnet Mask.
   • **Default Gateway**: Enter a Default Gateway.

6. Select **Apply**, then **OK**, and **OK** again. The printer will automatically print the configuration report. Confirm that all the settings are correct. **Quit Safari**. You may close and eject the installation CD-ROM. If necessary, restart the computer's firewall. You have successfully changed the IP address, subnet mask, and gateway.

Configuring the machine's wireless network

Before starting you will need to know the network name(SSID) of your wireless network and the network key if it is encrypted. This information was set when the access point (or wireless router) was installed. If you do not know about your wireless environment, please ask the person who has set up your network.

To configure wireless parameters, you can use **SyncThru™ Web Service**.

Using SyncThru™ Web Service

Before starting wireless parameter configuration, make sure cable connection status.

1. Check whether the network cable is connected to the machine. If not, connect the machine with a standard network cable.

2. Start a web browser such as Internet Explorer, Safari or Firefox and enter your machine's new IP address in the browser window.
   For example,

   🌐 http://192.168.1.133/

3. Click **Login** on the upper right of the SyncThru™ Web Service website.
   A log-in page appears.

4. Type in the **ID** and **Password** then click **Login**.
   If it's your first time logging into SyncThru™ Web Service, type in the below default ID and password.
   • **ID: admin**
   • **Password: sec00000**

5. When the **SyncThru™ Web Service** window opens, click **Network Settings**.

6. Click **Wireless** > **Wizard**.

   📝 **Wizard** will help you setup the wireless network configuration. However, if you want to set the wireless network directly, select **Custom**.

7. Select the one **Network Name(SSID)** in the list.
   • **SSID**: SSID (Service Set Identifier) is a name that identifies a wireless network. access points and wireless devices attempting to connect to a specific wireless network must use the same SSID. The SSID is case-sensitive.
   • **Operation Mode**: **Operation Mode** refers to the type of wireless connections (See "Wireless network name and network key" on page 38).
     - **Ad-hoc**: Allows wireless devices to communicate directly with each other in a peer-to-peer environment.
     - **Infrastructure**: Allows wireless devices to communicate with each other through an access point.

   📝 If your network's **Operation Mode** is **Infrastructure**, select the SSID of the access point. If the **Operation Mode** is **Ad-hoc**, select the machine's SSID. Note that "airportthru" is the default SSID of your machine.

8. Click **Next**.
   If wireless security setting window appears, enter the registered password (network key) and click **Next**.

9. The confirmation window appears, please check your wireless setup. If the setup is right, click **Apply**.

   ⚠️ Disconnect the network cable (standard or network). Your machine should then start communicating wirelessly with the network. In case of Ad-hoc mode, you can use a wireless LAN and wired LAN simultaneously.

COMPLETING THE INSTALLATION

After you have installed your Samsung wireless network printer, print another copy of the Network Configuration Report and keep it for future reference. You are now ready to use your new Samsung wireless printer on your network.

📝 If the wireless network seems to not be working, set all the network setting to the factory defaults and try again (See "Restoring factory default settings using SyncThru™ Web Service" on page 33).

TROUBLESHOOTING

Solving problems that might occur during wireless setting and installing the machine driver

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

Connecting Failure - Not found SSID
• The machine is unable to search network name (SSID) which you have selected or typed in. Check the network name (SSID) on your

access point and try connecting again.
- Your access point is not turned on. Turn on your access point.

Connecting Failure - Invalid Security
- You configured security incorrectly. Check the configured security on your access point and machine.

Connecting Failure - General Connection Error
- Your computer is not receiving a signal form your machine. Check the USB cable and your machine power.

Connecting Failure - Connected Wired Network
- Your machine is connected with wired network cable. Remove the wired network cable from your machine.

PC Connection Error
- The configured network address is unable to connect between your computer and machine.
    - For DHCP network environment

        The print receives the IP address automatically (DHCP) when computer is configured to DHCP.
    - For Static network environment

        The machine uses the static address when computer is configured to static address.

        If you computer has following addresses,
        - IP address: 192.168.1.100
        - Subnet address: 255.255.255.0
        - Gateway address: 192.168.1.1

        Type in the following address for your machine,
        - IP address: 192.168.1.101
        - Subnet address: 255.255.255.0
        - Gateway address: 192.168.1.1

Solving other problems

If problems occur while using the machine on a network, check the followings.

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

- Your computer, access point or machine may not be turned on.
- Check the wireless reception around the machine. If the reception is far from the machine or there is an obstacle, you might have difficulty receiving the signal.
- Cycle the power for access point (or wireless router), machine and computer. Sometimes cycling the power can recover network communication.
- Check whether firewall software (V3 or Norton) is blocking the communication.

    If the computer and the machine is connected on a same network it cannot be searched, firewall software might be blocking the communication. Refer to the user's guide for the software to turn it off and try searching the machine again.
- Check whether the machine's IP address is allocated correctly. You can check the IP address by printing the network configuration report.
- Check whether access point (or wireless router) has a configured security (password). If it has a password, refer to the access point (or wireless router) administrator.
- Check whether the machine's IP address. Reinstall the machine driver and change the settings to connect to the machine on the network. Due to the characteristics of DHCP, the allocated IP address could change if the machine is not used for a long time or if the access point has been reset.
- Check the wireless environment. You might not be able to connect to the network in the infrastructure environment where you need to type in a user's information before connecting to access point (or wireless router).
- This machine only supports IEEE 802.11 b/g/n and Wi-Fi. Other wireless communication (Bluetooth) is not supported.
- When using the Ad-hoc mode, for operating systems such as Windows Vista, you might need to set the wireless connection setting every time you use the wireless machine.
- You cannot use infrastructure mode and Ad-hoc mode at the same time for Samsung wireless network machine.
- The machine is within the range of the wireless network.

    For most networks, the machine should be within 30 meters (100 feet) of the wireless access point (or wireless router).
- The machine is located away from obstacles that could block the wireless signal.

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

    Make sure the machine and wireless access point (or wireless router) are not separated by poles, walls, or support columns containing metal or concrete.
- The machine is located away from other electronic devices that may interfere with the wireless signal.

    Many devices can interfere with the wireless signal, including baby monitors, motors, cordless phones, security system cameras, other wireless networks, and some Bluetooth devices.

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:

- Altitude adjustment
- Setting the default tray and paper

- Using the power saving feature
- Changing font setting (CLP-320N(K)/CLP-321N/CLP-325W(K) only)

ALTITUDE ADJUSTMENT

The 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 to the best print quality or best quality of print.

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

1	High 1
2	High 2
3	High 3
4	Normal
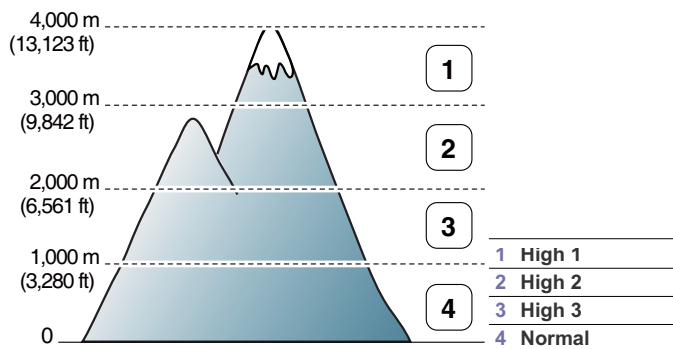
You can altitude adjustment in Printer Settings Utility.

1. Double-click the **Smart Panel** icon on the Windows task bar (or Notification Area in Linux). You can also click **Smart Panel** on the status bar in Mac OS X (See "Using the Smart Panel program" on page 66).

   Or, if you are a Windows user, you can launch it from the **Start** menu, select **Programs** or **All Programs** > **Samsung Printers** > **your printer driver name** > **Smart Panel**.
2. Click **Printer Setting**.
3. Select necessary options in the **Altitude Adjustment** drop-down list.
4. Click the **Apply** button.

   If your machine is connected to a network, SyncThru™ Web Service screen appears automatically. This can also be adjusted via SyncThru™ Web Service.

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/Server 2003, select **Printers and Faxes**.
   - For Windows Server 2008/Vista, select **Control Panel** > **Hardware and Sound** > **Printers**.
   - For Windows 7, select **Control Panel** > **Devices and Printers**.
   - For Windows Server 2008 R2, select **Control Panel** > **Hardware** > **Devices and Printers**.
3. Right-click on your machine.
4. For Windows Server 2003/Server 2008/XP/Vista, press **Printing Preferences**.

   For Windows 7/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 options such as number of copies, paper size or paper 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 57).

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.

USING THE POWER SAVING FEATURE

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

You change power save in Printer Settings Utility.

1. Double-click the **Smart Panel** icon on the Windows task bar (or Notification Area in Linux). You can also click **Smart Panel** on the status bar in Mac OS X (See "Using the Smart Panel program" on page 66).

   Or, if you are a Windows user, you can launch it from the **Start** menu, select **Programs** or **All Programs** > **Samsung Printers** > **your printer driver name** > **Smart Panel**.

2. Click **Printer Setting**.

3. Click **Setting** > **Power Save**. Select the appropriate value from the drop-down list, and then click **Apply**.

CHANGING FONT SETTING (CLP-320N(K)/CLP-321N/CLP-325W(K) ONLY)

Your machine has preset font setting depending on your region or country.

If you want to change the font or set the font for special condition, such as the DOS environment, you can change the font setting as follows:

1. Double-click the **Smart Panel** icon on the Windows task bar (or Notification Area in Linux). You can also click **Smart Panel** on the status bar in Mac OS X (See "Using the Smart Panel program" on page 66).

   Or, if you are a Windows user, you can launch it from the **Start** menu, select **Programs** or **All Programs** > **Samsung Printers** > **your printer driver name** > **Smart Panel**.

2. Click **Printer Setting**.

3. Click **Emulation**.

4. Confirm if **PCL** is selected in **Emulation Setting**.

5. Click **Setting**.

6. Select your preferred font in the **Symbol** set list.

7. Click **Apply**.

   Following information shows the proper font list for corresponding languages.
   - **Russian:** CP866, ISO 8859/5 Latin Cyrillic
   - **Greek:** ISO 8859/7 Latin Greek, PC-8 Latin/Greek
   - **Arabic & Farsi:** HP Arabic-8, Windows Arabic, Code Page 864, Farsi, ISO 8859/6 Latin Arabic

media and tray

This chapter introduces you how to load originals and print media into your machine.

This chapter includes:

- Selecting print media
- Changing the tray size
- Loading paper in the tray

- Printing on special media
- Setting the paper size and type
- Adjusting the output support

SELECTING PRINT MEDIA

You can print on a variety of print media, such as plain paper, envelopes, labels, and transparencies. Always use print media that meets the guidelines for use with your machine and from the appropriate tray.

Guidelines for selecting the print media

Print media that does not meet the guidelines outlined in this user's guide may cause the following problems:

- Poor print quality
- Increased paper jams
- Premature wear on the machine.
- Permanent fuser damage, not covered under warranty.

Properties, such as weight, composition, grain, and moisture content, are important factors that affect the machine's performance and the output quality. When you choose print materials, consider the following:

- The type, size and weight of the print media for your machine are described later in this section.
- Desired outcome: The print media you choose should be appropriate for your project.
- Brightness: Some print media are whiter than others and produce sharper, more vibrant images.
- Surface smoothness: The smoothness of the print media affects how crisp the printing looks on the paper.

- Some print media may meet all of the guidelines in this section and still not produce satisfactory results. This may be the result of the sheets characteristics, improper handling, unacceptable temperature and humidity levels, or other variables over which cannot be controlled.
- Before purchasing large quantities of print media, ensure that it meets the required specifications in this user's guide and meets your output requirements.

- Using print media that does not meet these specifications may cause problems or require repairs. Such repairs are not covered by Samsung's warranty or service agreements.
- Make sure not to use the inkjet photo paper with this machine. It could cause damage to the machine.

Media sizes supported in each mode

MODE	SIZE	TYPE	SOURCE
Simplex printing	For details about paper size, see "Print media specifications" on page 89.	For details about paper type, see "Print media specifications" on page 89.	Tray
Duplex printing (Manual)[a]	Letter, Legal, Oficio, US Folio, A4, ISO B5, JIS B5, Executive, A5, A6	Plain, Thick, Cotton, Color, Preprinted, Recycled, CardStock, Archive	Tray

a. 75 to 90 g/m² (20-24 lbs bond) only

CHANGING THE TRAY SIZE

To load different sizes of paper, such as Legal-sized paper, you need to adjust the paper guides to extend the paper tray.

To change the tray size to other size, you must adjust the paper length/width guides properly.
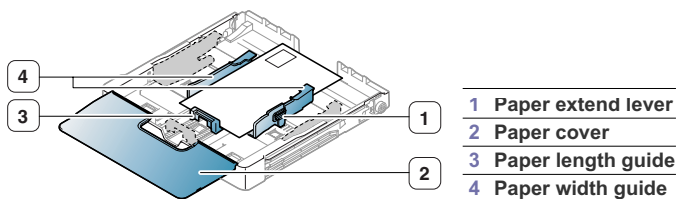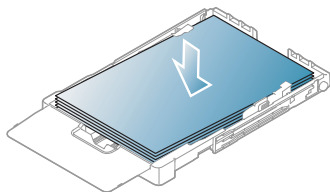

1	**Paper extend lever**
2	**Paper cover**
3	**Paper length guide**
4	**Paper width guide**

1. Pull the tray out of the machine. Open the paper cover and remove paper from the tray if necessary.
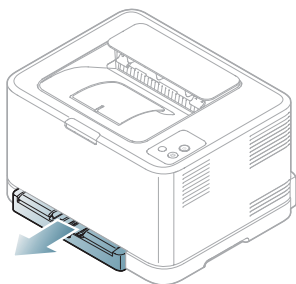
2. Pressing and unlatching the guide lock in the tray, pull the tray out manually.
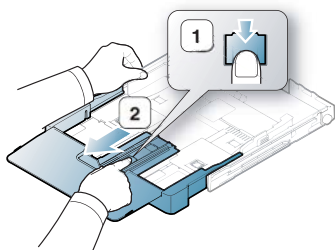
3. Place paper with the side you want to print facing up.

4. Slide the paper length guide until it lightly touches the end of the paper stack. Squeeze the paper width guide and slide it to the edge of the paper stack without causing it to bend.
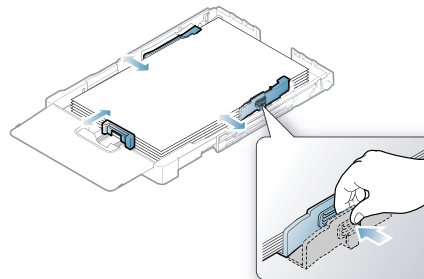
For paper smaller than Letter-sized, return the paper guides to their original positions and adjust the paper length guide and paper width guide.

If the paper that you need to print is shorter than length 222 mm (8.74 inches), press and unlatch the guide lock in the tray, push the tray in manually. Adjust the paper length guide and paper width guide.
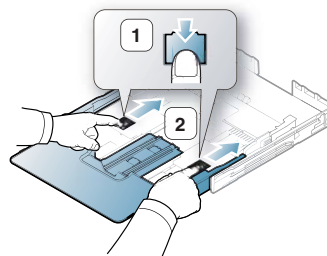
> • Do not push the paper width guides far enough to cause the materials to warp.
> • If you do not adjust the paper width guides, it may cause paper jams.

- Do not use a paper with more than 6 mm (0.24 inch.) curl.

5. Close the paper cover.
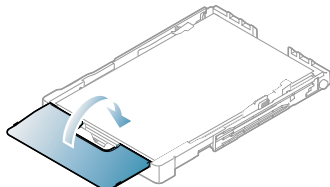
6. Slide the tray back into the machine until it clicks.
7. Set the paper type and size for the tray ("Setting the paper size and type" on page 54).

> If you experience problems with paper feeding, check whether the paper meets the media specifications. Then, try placing one sheet at a time in tray (See "Print media specifications" on page 89 or see "Printing on special media" on page 52).

The tray is preset to Letter or A4 size, depending on your country. To change the size to A4 or Letter, you must adjust the lever and paper width guide properly.

1. Pull the tray out of the machine. Open the paper cover and remove paper from the tray if necessary.
2. If you want to change the size to Letter, hold the lever at the back of the tray, and rotate the lever clockwise.
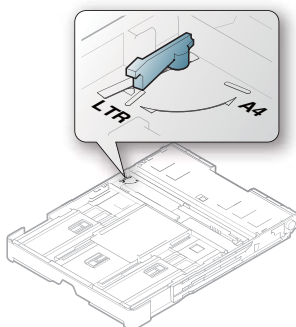
3. Squeeze the paper width guide and slide it to the edge of the lever.

> If you want to change the size to A4, first move the paper width guide to left and rotate the lever counterclockwise. If you force the lever, it could damage the tray.

LOADING PAPER IN THE TRAY

In the tray

1. Pull out the paper tray. Adjust the tray size to the media size you are loading (See "Changing the tray size" on page 49).
2. Flex or fan the edge of the paper stack to separate the pages before loading the paper.

3. Place the paper with the side you want to print facing up.
4. Squeeze the tray paper guides and adjust them to the width and length of the paper. Do not force them too much or the paper will be bent result in a paper jam or skew.
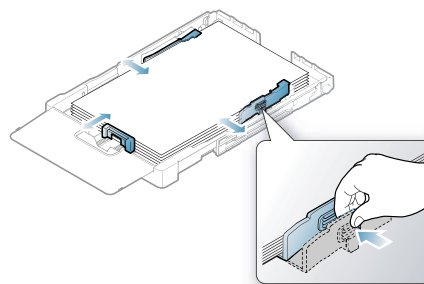

5. Close the paper cover.
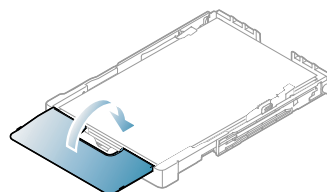
6. Insert the tray back into the machine.
7. To print in application, open an application and start the print menu.
8. Open **Printing Preferences** (See "Opening printing preferences" on page 57).
9. Press the **Paper** tab in **Printing Preferences** and select an appropriate paper type, size and source.
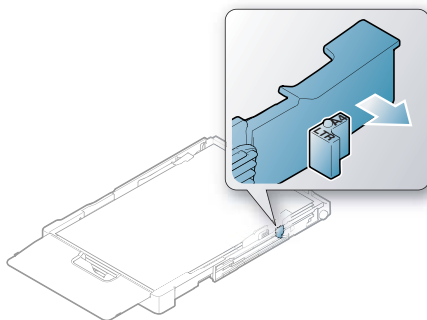10. Press **OK**.
11. Start printing in application.

> ✎ If you experience problems with paper feeding, check whether the paper meets the media specification. Then, try placing one sheet at a time in the tray (See "Print media specifications" on page 89).

The tray is preset to Letter or A4 size, depending on your country. To change the size to A4 or Letter, you must adjust the lever and paper width guide properly.

1. Pull the tray out of the machine. Open the paper cover and remove paper from the tray if necessary.
2. If you want to change the size to Letter, hold the lever at the back of the tray, and rotate the lever clockwise.
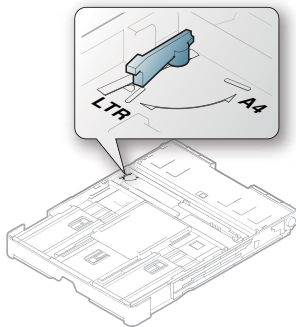
3. Squeeze the paper width guide and slide it to the edge of the lever.

> ✎ If you want to change the size to A4, first move the paper width guide to left and rotate the lever counterclockwise. If you force the lever, it could damage the tray.

Manual feeding in the tray

To load different sizes of paper such as envelope, transparency, labels or custom-sized paper, you need to adjust the paper guides for manual feeding in the tray.

To use manual feeding in the tray, you must adjust the paper length/width guide properly.

Tips on using the manual feeding method

Tips on manual feeding in the tray
• If you select **Manual Feeder** for **Source** from your software application, you need to press ⊚ (cancel button) each time you print a page. Load only one type, size and weight of print media at a time in the tray.
• To prevent paper jams, do not add media while printing. This also applies to other types of print media.
• Print media should be loaded face up with the top edge going into the tray first and be placed in the center of the tray.
• Always load the use recommended print media only to avoid paper jams and print quality problems (See "Print media specifications" on page 89).
• Flatten any curl on postcards, envelopes and labels before loading them into the tray.
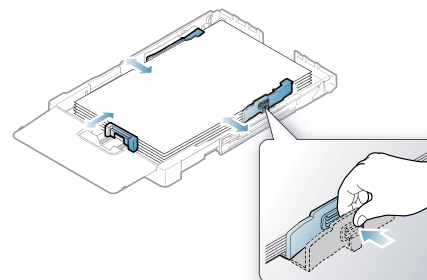
1. Pull the tray out of the machine. Open the paper cover and remove paper from the tray if necessary.
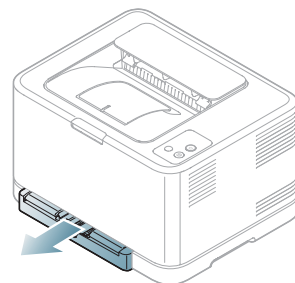
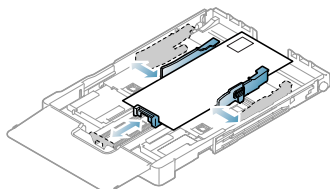2. Place paper with the side you want to print facing up.
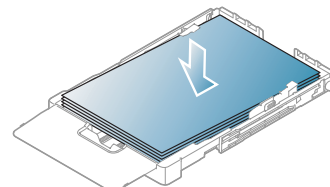
3. Squeeze the tray paper width guided and adjust them to the width of the paper until it lightly touches the end of the paper stack. Do not force too much, or the paper will bend resulting in a paper jam or skew.
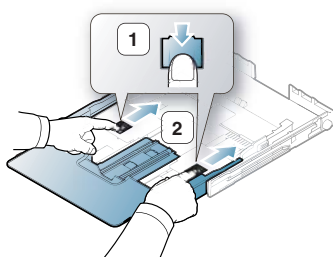

For paper smaller than Letter-sized, return the paper guides to their original positions and adjust the paper length guide and paper width
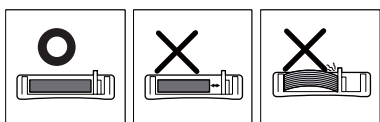
guide.

If the paper that you need to print is shorter than length 222 mm (8.74 inches), press and unlatch the guide lock in the tray, push the tray in manually. Adjust the paper length guide and paper width guide.
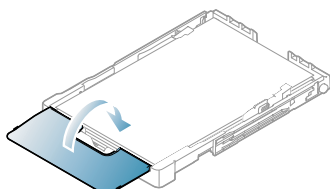

> • Do not push the paper width guides far enough to cause the materials to warp.
> • If you do not adjust the paper width guides, it may cause paper jams.

> • Do not use a paper with more than 6 mm (0.24 inch.) curl.
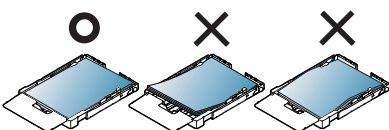
4. Close the paper cover.

5. Slide the tray back into the machine until it clicks.
6. To print in application, open an application and start the print menu.
7. Open **Printing Preferences** (See "Opening printing preferences" on page 57).
8. Press the **Paper** tab in **Printing Preferences**, and select an appropriate paper type.

> For example, if you want to use a label, set the paper type to **Label**.

9. Select **Manual Feeder** in paper source, then press **OK**.
10. Start printing in application.

> If you are printing multiple pages, load the next sheet after the first page prints out, and press the ⊚ (cancel button). Repeat this step for every page to be printed.

PRINTING ON SPECIAL MEDIA

The table below shows the available special media for each tray.

> When using special media, we recommend you feed one paper at a time. Check the maximum input number of media for each tray (See "Print media specifications" on page 89).

TYPES	TRAY	MANUAL FEEDING IN THE TRAY
Plain	●	●
Thick	●	●
Thin	●	●
Cotton	●	●
Color	●	●
Preprinted	●	●
Recycled	●	●
Envelope		●
Transparency		●
Labels		●
CardStock		●
Bond		●
Archive		●
Glossy Photo		●
Matte Photo		●

(●: Supported, Blank: Not supported)

The following media types are shown in the **Printing Preferences**. This paper type option allows you to set the type of paper to be loaded in the tray. Selecting the appropriate media will let you get the best printout quality. Selecting inappropriate media can result in poor print quality.

- **Plain:** Normal plain paper. Select this type if your printing on 60 to 90 g/m^2 (16 to 24 lbs).
- **Thick:** 90 to 163 g/m^2 (24 to 43 lbs) thick paper.
- **Thin:** 60 to 70 g/m^2 (16 to 19 lbs) thin paper.
- **Cotton:** 75 to 90 g/m^2 (20 to 24 lbs) cotton paper.
- **Color:** 75 to 90 g/m^2 (20 to 24 lbs) color-backgrounded paper.
- **Preprinted:** 75 to 90 g/m^2 (20 to 24 lbs) preprinted/letterhead paper.
- **Recycled:** 60 to 90 g/m^2 (16 to 24 lbs) recycled paper.

> When you use recycled paper, printouts might be wrinkled and/or jamming may occur due to excessive curl.

- **Envelope:** 75 to 90 g/m^2 (20 to 24 lbs) envelope.
- **Transparency:** 0.104 to 0.124 mm (0.004094 to 0.004882 inches) transparency paper.
- **Labels:** 120 to 150 g/m^2 (32 to 40 lbs) label.
- **CardStock:** 105 to 163 g/m^2 (28 to 43 lbs) cardstock.
- **Bond:** 105 to 120 g/m^2 (28 to 32 lbs) bond.
- **Archive:** 70 to 90 g/m^2 (19 to 24 lbs). If you need to keep the print-out for a long time, such as for archives.

- **Glossy Photo:** 111 to 220 g/m^2 (30 to 58 lbs bond) glossy photo paper.
- **Matte Photo:** 111 to 220 g/m^2 (30 to 58 lbs bond) matte photo paper.

Envelopes

Successful printing on envelopes depends upon the quality of the envelopes.

To print an envelope, place it flap side down with the stamp area on the top left side.
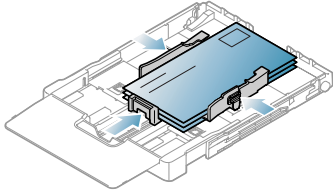
- When selecting envelopes, consider the following factors:
  - **Weight:** The weight of the envelope paper should not exceed 90 g/m^2 otherwise, jams may occur.
  - **Construction:** Prior to printing, envelopes should lie flat with less than 6 mm (0.24 inch.) curl, and should not contain air.
  - **Condition:** Envelopes should not be wrinkled, nicked, either damaged.
  - **Temperature:** Use envelopes that are compatible with the heat and pressure of the machine during operation.
- Use only well-constructed envelopes with sharp-and well-creased folds.
- Do not use stamped envelopes.
- Do not use envelopes with clasps, snaps, windows, coated lining, self-adhesive seals, or other synthetic materials.
- Do not use damaged or poorly made envelopes.
- Be sure the seam at both ends of the envelope extends all the way to the corner of the envelope.
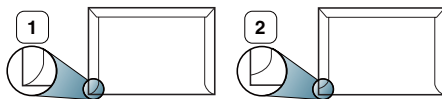

| 1 | Acceptable |
| 2 | Unacceptable |

- Envelopes with a peel-off adhesive strip or with more than one flap that folds over to seal must use adhesives compatible with the machine's fusing temperature about 170°C (338 °F) for 0.1 second. The extra flaps and strips might cause wrinkling, creasing, or jams and may even damage the fuser.
- For the best print quality, position margins no closer than 15 mm (0.59 inch.) from the edges of the envelope.
- Avoid printing over the area where the envelope's seams meet.

Transparencies

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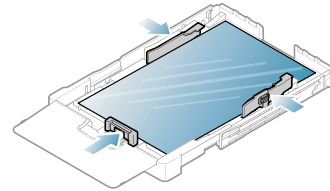

- Transparencies used in the machine must be able to withstand machine's fusing temperature.
- Place them on a flat surface after removing them from the machine.
- Do not leave unused transparencies in the paper tray for long periods of time. Dust and dirt may accumulate on them, resulting in spotty printing.
- To avoid smudging caused by fingerprints, handle transparencies carefully.
- To avoid fading, do not expose printed transparencies to prolonged sunlight.
- Ensure that transparencies are not wrinkled, curled, or have any torn edges.
- Do not use transparencies that separate from the backing sheet.
- To prevent transparencies from sticking to each other, do not let the printed sheets stack up as they are begin printed out.
- **Recommended media:** Xerox 3R91331 (A4), Xerox 3R2780 (Letter)

  Base type transparency (ex. Xerox 3R91331) results in better image and paper handling quality than paper backed (ex. Xerox 3R3028) or removable stripe (3R3108) ones.

> ⚠ • Transparency with static electricity can cause image quality problems.
> • Depending on the selection or storage conditions of the transparency, jam or image scratch might occur.

Labels

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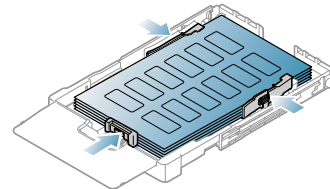

- When selecting labels, consider the following factors:
  - **Adhesives:** The adhesive material should be stable at your machine's fusing temperature (about 170°C (338 °F)).
  - **Arrangement:** Only use labels with no exposed backing between them. Labels can peel off sheets that have spaces between the labels, causing serious jams.
  - **Curl:** Prior to printing, labels must lie flat with no more than 13 mm (0.51 inch.) of curl in any direction.
  - **Condition:** Do not use labels with wrinkles, bubbles, or other indications of separation.
- Make sure that there is no exposed adhesive material between labels. Exposed areas can cause labels to peel off during printing, which can

cause paper jams. Exposed adhesive can also cause damage to machine components.
- Do not run a sheet of labels through the machine more than once. The adhesive backing is designed for only a single pass through the machine.
- Do not use labels that are separating from the backing sheet or are wrinkled, bubbled, or otherwise damaged.

Card stock/Custom-sized paper
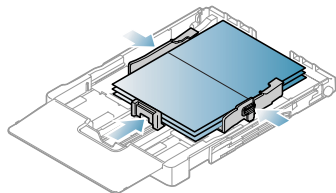
- Do not print on media smaller than 76 mm (3.00 inches) wide or 152.4 mm (6.00 inches) long.
- In software applications, set margins at least 6.4 mm (0.25 inches) away from the edges of the material.

Letterhead/Preprinted paper

SINGLE-SIDED	DOUBLE-SIDED
Face up	Face down

- Letterhead/ Preprinted paper 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. Check your machine's specification to view the fusing temperature about 170°C (338 °F).
- Letterhead/ Preprinted paper ink must be non-flammable and should not adversely affect machine rollers.
- Forms and letterhead should be sealed in a moisture-proof wrapping to prevent changes during storage.
- Before you load letterhead/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.

Recycled paper

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

- Recycled paper 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. Check your machine's specification to view the fusing temperature about 170°C(338 °F).
- Recycled paper ink must be non-flammable and should not adversely affect machine rollers.
- Before you load recycled paper, verify that the ink on the paper is dry.

During the fusing process, wet ink can come off recycled paper, reducing print quality.

Glossy photo

🖉 Load one paper in the tray at a time, glossy side facing up.

- Recommended media: Glossy paper (Letter) for this machine by **HP Brochure Paper** (Product: Q6611A).
- Recommended media: Glossy paper (A4) for this machine by **HP Superior Paper 160 glossy** (Product: Q6616A).

Matte photo

🖉 Load one paper in the tray at a time, side to be printed facing up.

SETTING THE PAPER SIZE AND TYPE

After loading paper in the paper tray, you need to set the paper size and type using the printer driver. Follow these steps to make your changes permanent.

🖉 The following procedure is for Windows XP. For other Windows OS, refer to the corresponding Windows User's Guide or online help.

1. Click the **Start** button on the computer screen.
2. Select **Printers and Faxes**.
3. Right-click on the printer icon and select **Printing Preferences**.
4. Click the **Paper** tab and change the setting on **Paper Options**.
5. Click **OK**.

ADJUSTING THE OUTPUT SUPPORT

The printed pages stack on the output tray, and the output support will help the printed pages align.
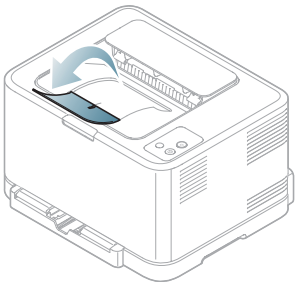
1 Output support

🖉 If you continuously print many pages, the surface of the output tray may become hot. Be careful not to touch the surface, and especially keep children away from the surface.

printing

This chapter explains common printing tasks.

This chapter includes:

- Introducing useful software program
- Printer driver features
- Basic printing
- Opening printing preferences
- Using help
- Using special print features

> The procedures in this chapter are mainly based on Windows XP.

INTRODUCING USEFUL SOFTWARE PROGRAM

Samsung AnyWeb Print

This tool helps you to screen-capture, preview, scrap and print the screen of Windows Internet Explorer more easily, when you use the ordinary program. Click **Start** > **All programs** > **Samsung Printers** > **Samsung AnyWeb Print** > **Download the latest version** to link the website where the tool is available for the download. This tool is available only for Windows operating systems.

Samsung Easy Color Manager

This program helps users to adjust color as they like. You can adjust the printout color as they see them on the monitor. The adjusted color can be stored on the printer driver and applied to printouts. Click **Start** > **All programs** > **Samsung Printers** > **Samsung Easy Color Manager** > **Download the latest version** to link the website where the tool is available for the download. This tool is available only for Windows and Macintosh operating systems.
(http://solution.samsungprinter.com/personal/colormanager)

PRINTER DRIVER FEATURES

Your printer drivers support the following standard features:

- Paper orientation, size, source, and media type selection
- Number of copies

In addition, you can use various special printing features. The following table shows a general overview of features supported by your printer drivers:

> Some models or operating systems may not support some of the feature(s) in the following table.

- Changing the default print settings
- Setting your machine as a default machine
- Printing to a file (PRN)
- Macintosh printing
- Linux printing

Printer driver

FEATURE	WINDOWS
Print quality option	●
Poster printing	●
Multiple pages per sheet	●
Booklet printing (manual)	●
Fit to page printing	●
Reduce and enlarge printing	●
Watermark	●
Overlay	●
Double-sided printing (manual)	●

(●: Supported, Blank: Not supported)

BASIC PRINTING

Your machine allows you to print from various Windows, Macintosh, or Linux applications. The exact steps for printing a document may vary depending on the application you use.

> - Your **Printing Preferences** window that appears in this user's guide may differ depending on the machine in use. However, the composition of the **Printing Preferences** window is similar. Check the operating system(s) that are compatible with your machine. Refer to the OS compatibility section of Printer Specifications (See "System requirements" on page 25).
> - When you select an option in **Printing Preferences**, you may see a warning mark, ⊗, or ⚠. An exclamation mark (⚠) means you can select that certain option but it is not recommended, and (⊗) mark means you cannot select that option due to the machine's settings or environment.

The following procedure describes the general steps required for printing from various Windows applications.

> Macintosh basic printing, see "Macintosh printing" on page 62.
> Linux basic printing, see "Linux printing" on page 63.

The following **Printing Preferences** window is for Notepad in Windows XP. Your **Printing Preferences** window may differ, depending on your operating system or the application you are using.

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** list.
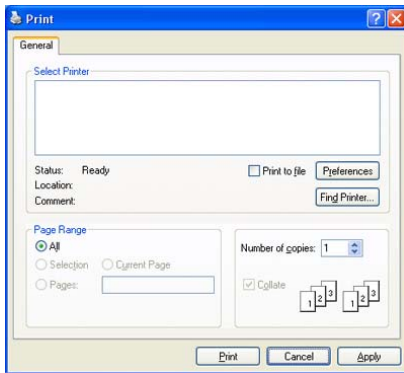
You can select the basic print settings including the number of copies and the print range from the **Print** window.

> 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 setting (See "Opening printing preferences" on page 57).

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

> If you are using Windows Internet Explorer, the **Samsung AnyWeb Print** too will save your time for screen-captured images or printing the image. Click **Start** > **All programs** > **Samsung Printers** > **Samsung AnyWeb Print** to link the website where the tool is available for the download.

Canceling a print job

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

1. Click the Windows **Start** menu.
2. For Windows 2000, select **Settings** > **Printers**.
   - For Windows XP/Server 2003, select **Printers and Faxes**.
   - For Windows Server 2008/Vista, select **Control Panel** > **Hardware and Sound** > **Printers**.
   - For Windows 7, select **Control Panel** > **Devices and Printers**.
   - For Windows Server 2008 R2, select **Control Panel** > **Hardware** > **Devices and Printers**.
3. For Windows 2000, XP, Server 2003, Vista and Server 2008, double-click your machine.

   For Windows 7 and Windows Server 2008 R2, right-click your printer icon > context menus > **See what's printing**.

   > If **See what's printing** item has a ▶ mark, you can select other printer drivers connected with selected printer.

4. From the **Document** menu, select **Cancel**.

> You can also access this window by simply double-clicking the machine icon ( ) in the Windows task bar.

> You can also cancel the current job by pressing ⊚ on the control panel.

OPENING PRINTING PREFERENCES

You can preview the settings you selected on the upper right of the **Printing Preferences**.

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**.
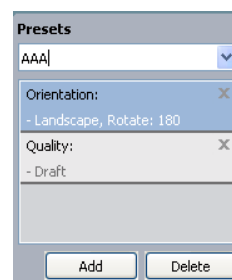4. Click **Properties** or **Preferences**.
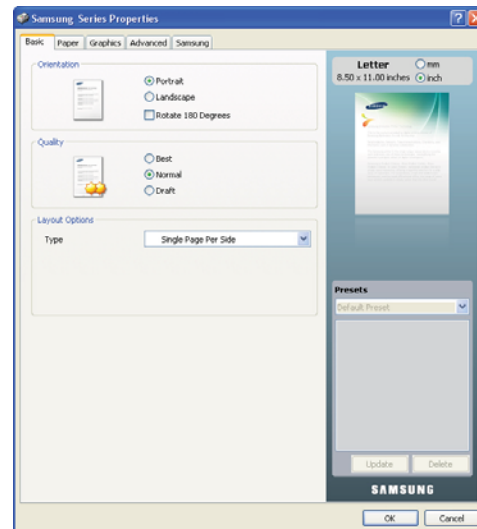
Using a favorite setting

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

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

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

If you click **Add**, the **Add** button changes to the **Update** button. Select more options and click **Update**, settings will be added to the **Presets** you made.

To use a saved setting, select it from the **Presets** drop-down list. The machine is now set to print according to the setting you selected.

To delete saved settings, select it from the **Presets** drop-down list and click **Delete**.

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

USING HELP

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

If you want to search information via a keyword, click the **Samsung** tab in the **Printing Preferences** window, and enter a keyword in the input line of the **Help** option. To get information about supplies, driver update or registration and so on, click appropriate buttons.

USING SPECIAL PRINT FEATURES

Special print features include:
- "Printing multiple pages on one sheet of paper" on page 58.
- "Printing posters" on page 58.
- "Printing booklets (Manual)" on page 58.
- "Printing on both sides of the paper (Manual)" on page 59.
- "Change percentage of your document" on page 59.
- "Fitting your document to a selected paper size" on page 59.
- "Using watermarks" on page 59.
- "Using overlay" on page 60.
- "Graphics tab options" on page 61.

Printing multiple pages on one sheet of paper

You can select the number of pages to print on a single sheet of paper. To print more than one page per sheet, the pages will be reduced in size and arranged in the order you specify. You can print up to 16 pages on one sheet.

1. To change the print settings from your software application, access **Printing Preferences** (See "Opening printing preferences" on page 57).
2. Click the **Basic** tab, select **Multiple Pages Per Side** in the **Type** drop-down list.
3. Select the number of pages you want to print per sheet (2, 4, 6, 9, or 16) in the **Pages per Side** drop-down list.
4. Select the page order from the **Page Order** drop-down list, if necessary.
5. Check **Print Page Border** to print a border around each page on the sheet.
6. Click the **Paper** tab, select the **Size**, **Source** and **Type**.
7. Click **OK** or **Print** until you exit the **Print** window.

Printing posters

This feature allows you to print a single-page document onto 4, 9 or 16 sheets of paper, for the purpose of pasting the sheets together to form one poster-size document.
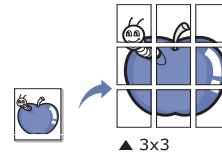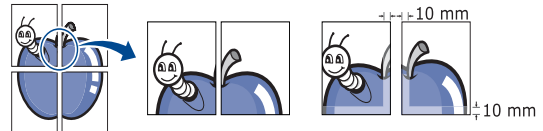
▲ 3x3

1. To change the print settings from your software application, access **Printing Preferences** (See "Opening printing preferences" on page 57).
2. Click the **Basic** tab, select **Poster Printing** in the **Type** drop-down list.
3. Select the page layout you want.
   Available layouts:
   - **Poster 2x2:** Document will be enlarged and be divided into 4 pages.
   - **Poster 3x3:** Document will be enlarged and be divided into 9 pages.
   - **Poster 4x4:** Document will be enlarged and be divided into 16 pages.
4. Select the **Poster Overlap** value. Specify **Poster Overlap** in millimeters or inches by selecting the radio button on the upper right of **Basic** tab to make it easier to paste the sheets together.

5. Click the **Paper** tab, select the **Size**, **Source**, and **Type**.
6. Click **OK** or **Print** until you exit the **Print** window.
7. You can complete the poster by pasting the sheets together.

Printing booklets (Manual)

This feature prints your document on both sides of a paper and arranges the pages so that the paper can be folded in half after printing to produce a booklet.

If you want to make a booklet, you need to print on Letter, Legal, A4, US Folio or Oficio sized print media.

1. To change the print settings from your software application, access the **Printing Preferences** (See "Opening printing preferences" on page 57).
2. Click the **Basic** tab, select **Booklet Printing** from the **Type** drop-down list.
3. Click the **Paper** tab, select the **Size**, **Source**, and **Type**.

   The **Booklet Printing** option is not available for all paper sizes. In order to find out the available paper size for this feature, select the available paper size in the **Size** option on the **Paper** tab.

   If you select an unavailable paper size, this option can be automatically canceled. Select only available paper. (paper without ⚠ or ✖ mark).
4. Click **OK** or **Print** until you exit the **Print** window.

5. After printing, fold and staple the pages.

Printing on both sides of the paper (Manual)

You can print on both sides of a paper (duplex). Before printing, decide how you want your document oriented. You can use this feature with Letter, Legal, A4, US Folio or Oficio sized paper (See "Print media specifications" on page 89).

> We recommend not to print on both sides of special media, such as labels, envelopes, or thick paper. It may cause a paper jam or damage the machine.

1. To change the print settings from your software application, access **Printing Preferences** (See "Opening printing preferences" on page 57).
2. Click the **Advanced** tab.
3. From the **Double-Sided Printing (Manual)** section, select the binding option you want.
- **None**
- **Long Edge:** This option is the conventional layout used in bookbinding.

- **Short Edge:** This option is the conventional layout used in calendars.
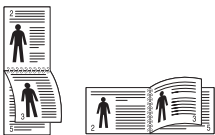
4. Click the **Paper** tab, select the **Size**, **Source**, and **Type**.
5. Click **OK** or **Print** until you exit the **Print** window.

> 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. Follow the on-screen instructions to complete the printing job.

Change percentage of your document

You can change the size of a document to appear larger or smaller on the printed page by typing in a percentage you want.
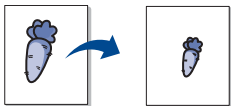
1. To change the print settings from your software application, access **Printing Preferences** (See "Opening printing preferences" on page 57).
2. Click the **Paper** tab.
3. Enter the scaling rate in the **Percentage** input box.
You can also click the up/down arrows to select the scaling rate.
4. Select the **Size**, **Source**, and **Type** in **Paper Options**.
5. Click **OK** or **Print** until you exit the **Print** window.

Fitting your document to a selected paper size

This feature allows you to scale your print job to any selected paper size regardless of the document size. This can be useful when you want to check fine details on a small document.
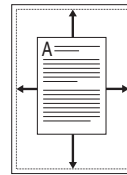
1. To change the print settings from your software application, access **Printing Preferences** (See "Opening printing preferences" on page 57).
2. Click the **Paper** tab.
3. Select the paper size you want from the **Fit to Page**.
4. Select the **Size**, **Source** and **Type** in **Paper Options**.
5. Click **OK** or **Print** until you exit the **Print** window.

Using watermarks

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.

There are several predefined watermarks that come with the machine. They can be modified, or you can add new ones to the list.

Using an existing watermark

1. To change the print settings from your software application, access **Printing Preferences** (See "Opening printing preferences" on page 57).
2. Click the **Advanced** tab, and select the desired watermark from the **Watermark** drop-down list. You will see the selected watermark in the preview image.
3. Click **OK** or **Print** until you exit the print window.

Creating a watermark

1. To change the print settings from your software application, access **Printing Preferences** (See "Opening printing preferences" on page 57).
2. From the **Advanced** tab, select **Edit** from the **Watermark** drop-down list. The **Edit Watermarks** window appears.
3. Enter a text message in the **Watermark Message** box. You can enter up to 256 characters. The message displays in the preview window.
When the **First Page Only** box is checked, the watermark prints on the first page only.
4. Select watermark options.
You can select the font name, style, size, and shade from the **Font Attributes** section, as well as set the angle of the watermark from the **Message Angle** section.
5. Click **Add** to add a new watermark to the **Current Watermarks** list.

6. When you have finished, click **OK** or **Print** until you exit the **Print** window.

To stop printing the watermark, select **None** from the **Watermark** drop-down list.

Editing a watermark

1. To change the print settings from your software application, access **Printing Preferences** (See "Opening printing preferences" on page 57).
2. Click the **Advanced** tab, select **Edit...** from the **Watermark** drop-down list. The **Edit Watermarks** window appears.
3. Select the watermark you want to edit from the **Current Watermarks** list and change the watermark message and options.
4. Click **Update** to save the changes.
5. Click **OK** or **Print** until you exit the **Print** window.

Deleting a watermark

1. To change the print settings from your software application, access **Printing Preferences** (See "Opening printing preferences" on page 57).
2. Click the **Advanced** tab, select **Edit...** from the **Watermark** drop-down list. The **Edit Watermarks** window appears.
3. Select the watermark you want to delete from the **Current Watermarks** list and click **Delete**.
4. Click **OK** or **Print** until you exit the **Print** window.

Using overlay

An overlay is content you store on your hard disk drive that can be superimposed over any document you print. An overlay is 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, instead you can just print the letterhead overlay on your document.
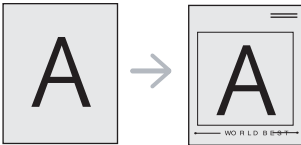
Creating a new page overlay

To use a page overlay, you must create a new page overlay file containing your content.

1. Create or open a document containing the content you want to use in a new page overlay. Position the items exactly where you want them to appear when they are added to the original.
2. To save the document as an overlay, access **Printing Preferences** (See "Opening printing preferences" on page 57).
3. Click the **Advanced** tab, and select **Edit...** from the **Text** drop-down list. The **Edit Overlay** window appears.
4. In the **Edit Overlay** window, click **Create**.
5. In the **Save As** window, type a name of up to eight characters in the **File name** box. Select the destination path, if necessary. (The default is C:\FormOver.)
6. Click **Save**. The name appears on the **Overlay List**.
7. Click **OK** or **Print** until you exit the **Print** window.

8. The file is not printed. Instead, it is stored on your computer hard disk drive.

  The overlay document size must match same as the document you print. Do not create an overlay with a watermark.

Using a page overlay

After an overlay has been created, it is ready to be printed with your document. To print an overlay with a document:

1. Create or open the document you want to print.
2. To change the print settings from your software application, access **Printing Preferences** (See "Opening printing preferences" on page 57).
3. Click the **Advanced** tab.
4. Select the desired overlay from the **Text** drop-down list.
5. 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.
6. 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 that you wish to print an overlay on your document.

   If this box is not checked and an overlay has been selected, the overlay automatically prints with your document.
7. Click **OK** or **Print** until you exit the **Print** window.

   The selected overlay prints over your document.

  The resolution of the overlay document must match the resolution of the original print job.

Deleting a overlay

You can delete page overlays that you no longer use.

1. In the **Printing Preferences** window, click the **Advanced** tab.
2. Select **Edit...** in the **Overlay** drop-down list.
3. Select the overlay you want to delete from the **Overlay List** box.
4. Click **Delete**.
5. When the confirming message window appears, click **Yes**.
6. Click **OK** or **Print** until you exit the **Print** window.

Graphics tab options

Use the following Graphics options to adjust the print quality for your specific printing needs.

  • The options you can select may vary depending on your printer model.
  • If the option is grayed out or not shown, that option is not applicable with the printer language you are using.
    To change the printer language:
    1. Click the Windows **Start** menu.
    2. For Windows 2000, select **Settings** > **Printers**.
       - For Windows XP/Server 2003, select **Printer and Faxes**.
       - For Windows Server 2008/Vista, select **Control Panel** > **Hardware and Sound** > **Printers**.
       - For Windows 7, select **Control Panel** > **Hardware and**