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Environmental and Safety Consideration

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 825.

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

Warning

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

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



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

DANGER - LASER RADIATION AVOID DIRECT
EXPOSURE TO BEAM.

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

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

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

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

PERIGO - 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.
UNNGÅ UDSAETTEELSE FOR STRÅLNING.

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

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

VAROITUS - NÄKYMÄTÖNTÄ LASERSÄTEILYÄ AVATTAESSA.
VARO SUORAA ALTISTUMISTA SÄTEELLE.

注意 - 严禁揭开此盖, 以免激光泄露灼伤

주의 - 이 덮개를 열면 레이저광에 노출될 수 있으므로
주의하십시오.

Ozone Safety



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

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

Power Saver



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

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

The energy star emblem does not represent EPA endorsement of any product or service.

Recycling



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

Radio Frequency Emissions

FCC regulations

This device 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:

Reposition 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 an experienced radio/TV technician for help.



Caution

Changes 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 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 1mW/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 can not be collocated with another transmitter and transmitting antenna."

Declaration of Conformity (European Countries)

Approvals and Certifications



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

January 1, 1995: Council Directive 73/23/EEC Approximation of the laws of the member states related to low voltage equipment.

January 1, 1996: Council Directive 89/336/EEC (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 and/or TBR 38. 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)

This Product is a printer; low power, Radio LAN type devices (radio frequency (RF) wireless communication devices), operating in the 2.4 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 **CE** 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, Denmark, Finland, France (with frequency restrictions), Germany, Greece, Ireland, Italy, Luxembourg, The Netherlands, Portugal, Spain, Sweden and the United

Accept EU 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

Accept EU 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 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, please 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. 802.11B (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. Please 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.

WARNING

- Do not disassemble the printer. Doing so may give you an electric shock.
- If you continuously print many pages, the surface of the output tray may become hot. Be careful not to touch the surface, especially for children.

1 Introduction

Congratulations on the purchase of your printer!

This chapter includes:

- **Special features**
- **Printer overview**
- **Finding more information**

Special features

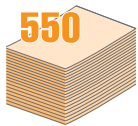
Your new printer is equipped with several special features that improve the print quality. You can:

Print with excellent quality and high speed



- You can print up to **1200 x 1200 dpi** effective output. See the **Software Section**.
- Your printer prints A4-sized paper at up to 28 ppm^a and letter-sized paper at up to 30 ppm. If you use the ML-3051ND, for duplex printing, your printer prints A4-sized paper at up to 19 ipm^b and letter-sized paper at up to 21 ipm.

Handle paper flexibly



- The multi-purpose tray supports letterheads, envelopes, labels, transparencies, custom-sized materials, postcards, and heavy paper. The multi-purpose tray holds up to 50 sheets of plain paper.
- The **250-sheet tray 1** and **250-sheet optional tray 2** support plain paper in various sizes.
- Two output tray; select either the output tray (face-down) or the rear cover (face-up) for the most convenient access.
- **Straight-through paper path** capability from the multi-purpose tray to the rear cover.

Create professional documents



- Print **Watermarks**. You can customize your documents with words, such as "Confidential." See the **Software Section**.
- Print **Booklets**. This feature enables you to easily print a document to create a book. Once printed, all you have to do is fold and staple the pages. See the **Software Section**.
- 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 the **Software Section**.

a. pages per minute
b. images per minute

Save time and money



- This printer allows you to use **Toner Save** mode to save toner. See page 2.7.
- You can print on both sides of the paper to save paper (**double-sided printing**) if you use the ML-3051ND.
- You can print multiple pages on a single sheet of paper to save paper (**2-Up printing**). See the **Software Section**.
- You can use preprinted forms and letterhead with plain paper. See the **Software Section**.
- This printer automatically **conserves electricity** by substantially reducing power consumption when not in use.
- This printer meets **Energy Star** guidelines for energy efficiency.

Expand the printer capacity



- The ML-3050 has 32 MB of memory which can be expanded to **288 MB**. The ML-3051N or ML-3051ND has 64 MB of memory which can be expanded to **320 MB**. See page 10.1.
- A **Network interface** enables network printing. You can add an optional network printer server to the ML-3050.
- You can also add an optional wireless network interface card to the ML-3051N and ML-3051ND.
- You can add a 250-sheet optional tray 2 to your printer. This tray lets you add paper to the printer less often.
- A PostScript 3 Emulation* (PS) enables PS printing (ML-3051N, ML-3051ND).

* PostScript 3 Emulation



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- * 136 PS3 fonts
- Contains UFST and MicroType from Monotype Imaging Inc..

Print in various environments

- You can print in **Windows 95/98/Me/NT 4.0/2000/XP/2003**.
- Your printer is compatible with **Linux** and **Macintosh**.
- Your printer comes with both **Parallel** and **USB** interfaces.
- You can also use a **network interface**. The ML-3051N and ML-3051ND come with a built-in network interface, 10/100 Base TX. However, you need to install the optional network printer server to the ML-3050.

Printer features

The table below lists a general overview of features supported by your printer.

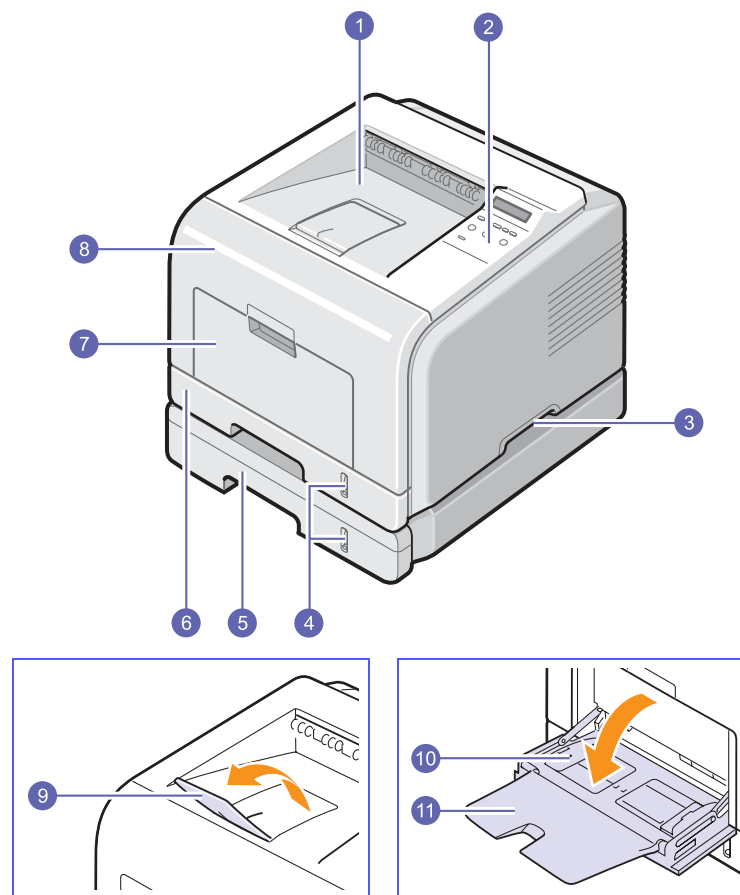
(I: Installed, O: Option, NA: Not Available)

Features	ML-3050	ML-3051N	ML-3051ND
IEEE 1284 Parallel	I	I	I
USB 2.0	I	I	I
Network Interface (Ethernet 10/100 Base TX)	O	I	I
Wireless LAN (IEEE 802.11 b/g Wireless LAN)	O	O	O
PostScript* Emulation	NA	I	I
Duplex printing ^a	NA	NA	I

a. Printing on both sides of paper.

Printer overview

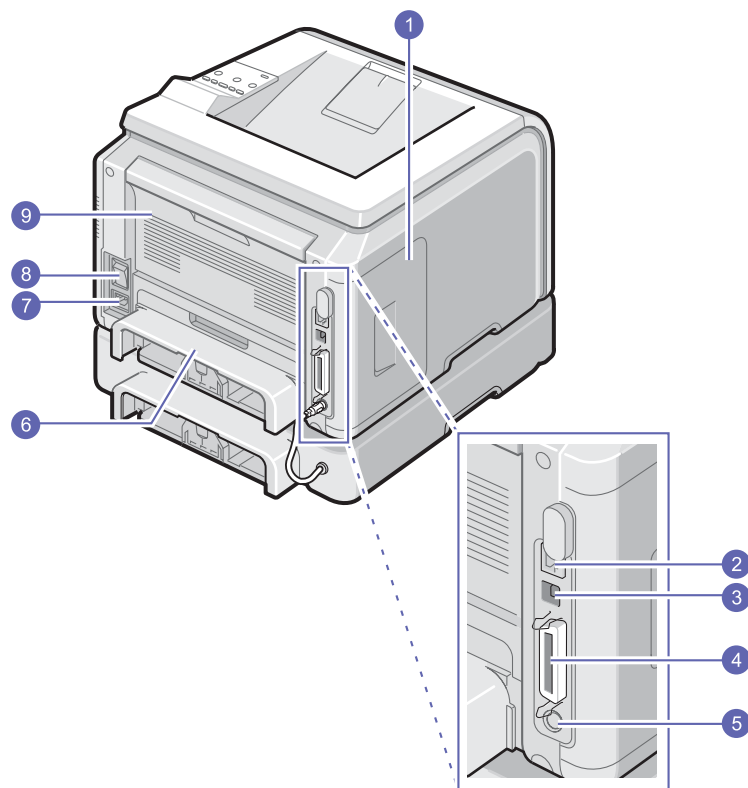
Front view



* The figure above shows an ML-3051ND with all available options.

1	output tray	7	multi-purpose tray
2	control panel	8	front cover
3	handle	9	output support
4	paper level indicator	10	multi-purpose tray paper width guides
5	optional tray 2	11	multi-purpose tray extension
6	tray 1		

Rear view

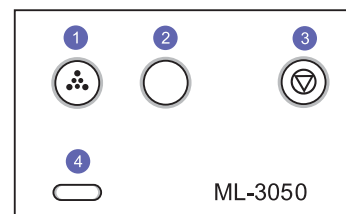


* The figure above shows an ML-3051ND with all available options.

1	control board cover	6	duplex unit
2	network port	7	power receptacle
3	USB port	8	power switch
4	parallel port	9	rear cover
5	optional tray 2 cable connector		

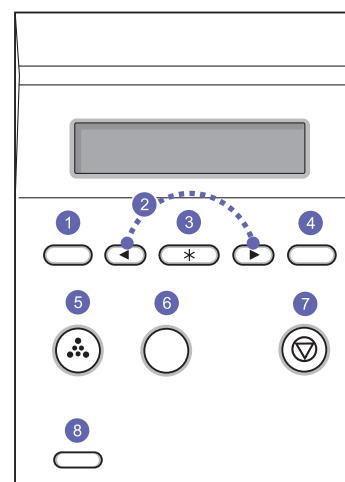
Control panel overview

ML-3050



- | | |
|---|---|
| 1 | Toner Save: Allows you to save on toner by using less toner in printing. |
| 2 | Demo: Allows you to print a demo page. |
| 3 | Stop: Stops an operation at any time. |
| 4 | Status: Shows the status of your printer. See page 9.6. |

ML-3051N and ML-3051ND



- | | |
|---|--|
| 1 | Menu: Enters Menu mode and scrolls through the available menus. |
| 2 | Scroll buttons: Scroll through the options available in the selected menu, and increase or decrease values. |
| 3 | OK: Confirms the selection on the display. |
| 4 | Back: Sends you back to the upper menu level. |
| 5 | Toner Save: Allows you to save on toner by using less toner in printing. |
| 6 | ML-3051N_Demo: Allows you to print a demo page. |
| 7 | ML-3051ND_Duplex: Allows you to print documents on both sides of the paper. |
| 7 | Stop: Stops an operation at any time. |
| 8 | Status: Shows the status of your printer. See page 9.6. |

Finding more information

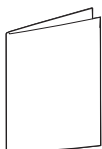
You can find information for setting up and using your from the following resources, either printed or onscreen.

Quick Install Guide



Provides information on setting up your printer and, therefore, be sure to follow the instructions in the guide to get the printer ready.

Online User's Guide



Provides you with step-by-step instructions for using your printer's full features, and contains information for maintaining your printer, troubleshooting, and installing accessories.

This user's guide also contains the **Software Section** providing you with information on how to print documents with your printer on various operating systems, and how to use the supplied software utilities.



Note

You can access the user's guides in other languages from the **Manual** folder on the printer driver CD.

Network Printer User's Guide



Contained on the network utilities CD, provides you with information on setting up and connecting your printer to a network.

Printer Driver Help



Provides you with help information on printer driver properties and instructions for setting up the properties for printing. To access a printer driver help screen, click **Help** from the printer properties dialog box.

Samsung website

If you have Internet access, you can get help, support, printer drivers, manuals, and order information from the Samsung website, www.samsungprinter.com.

Selecting a location

Select a level, stable place with adequate space for air circulation. Allow extra space for opening covers and trays.

The area should be well-ventilated and away from direct sunlight or sources of heat, cold, and humidity. Do not set the printer close to the edge of your desk or table.

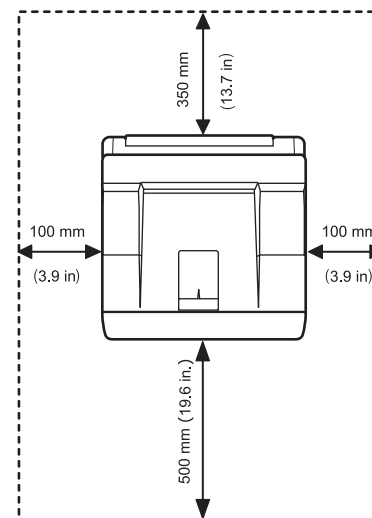
Clearance space

Front: 500 mm (enough space so that trays can be opened or removed)

Back: 350 mm (enough space to allow opening of the rear cover or the duplex unit)

Right: 100 mm (enough space for ventilation)

Left: 100 mm (enough space to allow opening of the control panel cover)



2 System setup

This chapter provides step by step information on setting up your printer.

This chapter includes:

- **Using control panel menus (ML-3051N, ML-3051ND only)**
- **Menu overview**
- **Printing a demo page**
- **Changing the display language (ML-3051N, ML-3051ND only)**
- **Using toner save mode**

Using control panel menus (ML-3051N, ML-3051ND only)

A number of menus are available to make it easy for you to change the printer settings. The diagram on the next column shows the menus and all of the menu items available in each menu. The items in each menu and the options you can select are described in more detail in the tables beginning on page 2.2.

Accessing control panel menus

You can control your printer from the printer's control panel. You can also set the control panel menus while the printer is in use.

- 1 Press **Menu** until the menu you want appears on the bottom line of the display and press **OK**.
- 2 Press the **Scroll** buttons until the desired menu item appears and press **OK**.
- 3 If the menu item has sub menus, repeat step 2.
- 4 Press the **Scroll** buttons to access the desired setting option or the required value.
- 5 Press **OK** to save your selection.

An asterisk (*) appears next to the selection on the display, indicating that it is now the default.

- 6 Press **Stop** to return to Standby mode.

After 60 seconds of inactivity (no key being pressed), the printer automatically returns to Standby mode.

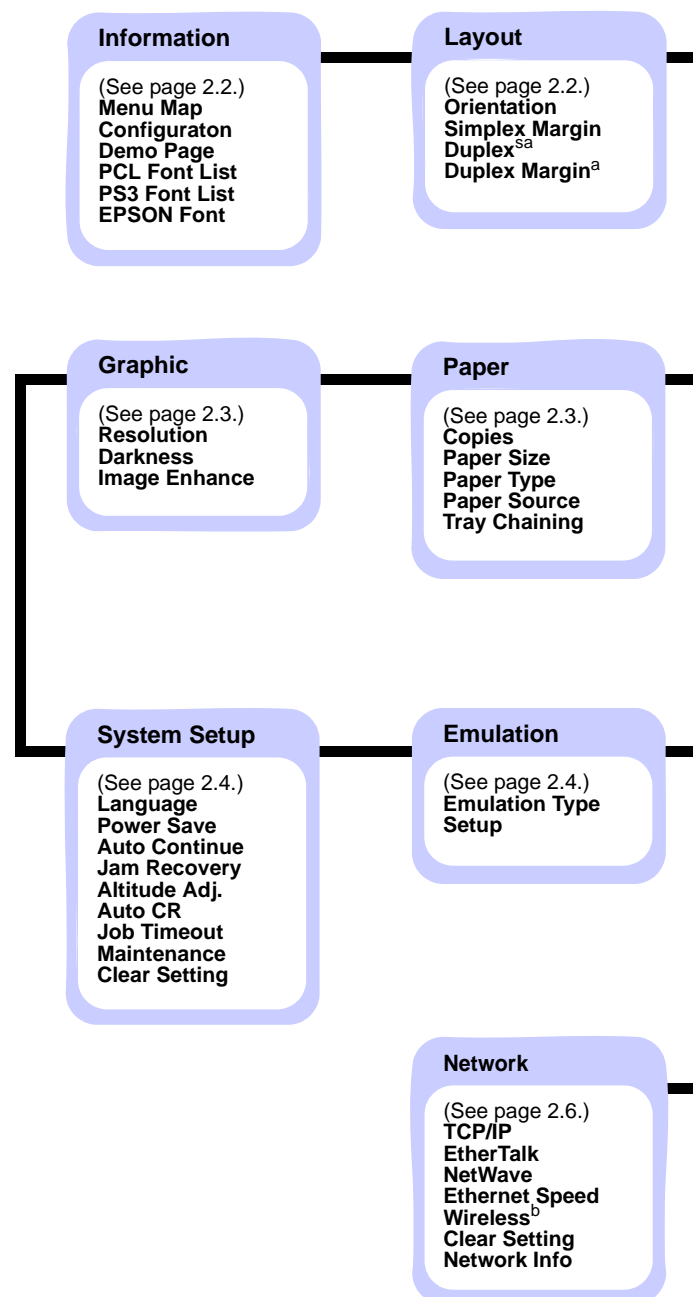


Note

Print settings made from the printer driver on a connected computer override the settings on the control panel.

Menu overview

The control panel menus are used to configure the printer. The control panel provides access to the following menus:



a. Available with the ML-3051ND.

b. Available with optional wireless network interface.



Information menu

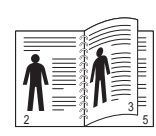
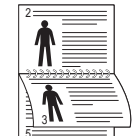




This menu contains printer information pages that give details about the printer and its configuration.

Item	Explanation
Menu Map	The menu map shows the layout and current settings of the control panel menu items.
Configuraton	The configuration page shows the printer's current configuration. See page 8.1.
Demo Page	The demo page allows you to check if your printer properly performs printing. See page 2.6.
PCL Font List PS3 Font List EPSON Font	The font sample list shows all of the fonts currently available in the selected language.

Layout menu

Use the **Layout** menu to define all settings relating to output.
(*: the default setting)

Item	Explanation
Orientation	<p>Values: Portrait*, Landscape</p> <p>Choose the default orientation of the print image on the page.</p> <div style="display: flex; justify-content: space-around; align-items: center;"> <div style="text-align: center;">  <p>Portrait</p> </div> <div style="text-align: center;">  <p>Landscape</p> </div> </div>
Simplex Margin	<p>Values: 0.0*</p> <p>Set the margin of print materials for one-sided printing. You can increase or decrease the value in 0.1 mm increments.</p> <ul style="list-style-type: none"> • Top Margin: Set the top margin, from 0.0 to 250 mm. • Left Margin: Set the left margin, from 0.0 to 164 mm.

Item	Explanation
Duplex	<p>Values: Off*, Long Edge, Short Edge</p> <p>To print on both sides of paper, choose the binding edge as follows.</p> <ul style="list-style-type: none"> • Long Edge: Flip on the long edge. Prints pages to read like a book. • Short Edge: Flip on the short edge. Prints pages to read by flipping over like a note pad. <div style="display: flex; justify-content: space-around; align-items: center;"> <div style="text-align: center;">  <p>Long Edge in the Portrait orientation</p> </div> <div style="text-align: center;">  <p>Long Edge in the Landscape orientation</p> </div> </div> <div style="display: flex; justify-content: space-around; align-items: center; margin-top: 20px;"> <div style="text-align: center;">  <p>Short Edge in the Portrait orientation</p> </div> <div style="text-align: center;">  <p>Short Edge in the Landscape orientation</p> </div> </div> <p>Select Off to print on one side of the paper.</p> <p> Note This menu item is available only with the ML-3051ND.</p>
Duplex Margin	<p>Values: Top/Left:5.0*, Short/Long: 0*</p> <p>In this menu, you can set the margins for double-sided printing. You can increase or decrease the value in 0.1 mm increments.</p> <ul style="list-style-type: none"> • Top Margin: Set the top margin, from 0.0 to 9.9 mm. • Left Margin: Set the left margin, from 0.0 to 9.9 mm. • Short Binding: Set the bottom margin of the back of the page for short binding, from 0.0 to 22 mm. • Long Binding: Set the right margin of the back of the page for long binding, from 0.0 to 22 mm. <p> Note This menu item is available only with the ML-3051ND.</p>

Paper menu

Use the **Paper** menu to define all settings relating to print material input and output, as well as the specific print material you are using with your printer.

(*: the default setting)

Item	Explanation
Copies	<p>Values: 1* ~ 999</p> <p>Set the default number of copies by selecting any number from 1 to 999.</p>
Paper Size	<p>Values: A4, A5, A6, JIS B5, ISO B5, Letter, Legal, Executive, No.10 Env., Monarch Env., DL Env., C5 Env., C6 Env., US Folio, Custom Paper</p> <p>* Letter for USA, A4 for Europe and Asia</p> <p>Select the paper size currently loaded in the tray.</p>
Paper Type	<p>Values: Plain Paper*, Bond Paper, Transparency, Envelope, Labels, Post Card, CardStock, Preprinted, Recycled, Color Paper, Cotton Paper, Thick Paper, Thin Paper</p> <p>Select the paper type currently loaded in the tray.</p>
Paper Source	<p>Values: Tray 1, Tray 2, MP Tray, Manual Tray, Auto*</p> <p>Using this item, you can set which tray you want to use.</p> <ul style="list-style-type: none"> • If you select Auto, the printer can automatically determine the source. • Select MP Tray or Manual Tray to use the multi-purpose tray. If you select Manual Tray, you need to press Stop (ML-3050) or OK (ML-3051N, ML-3051ND) each time you print a page. • Tray 2 is available only when an optional tray 2 is installed.
Tray Chaining	<p>Values: Off, On*</p> <p>When you select any other value except Auto from Paper Source and the selected tray is empty, the printer automatically prints from other trays.</p> <p>If this menu item is set to Off, the Status LED lights red and the printer doesn't work until you insert paper into the specified tray.</p>

Graphic menu

Use the **Graphic** menu to change settings affecting the quality of the printed characters and images.

(*: the default setting)

Item	Explanation
Resolution	<p>Values: 300dpi-Draft, 600dpi-Normal*, 1200dpi-Best</p> <p>Specify the number of dots printed per inch (dpi). The higher the setting, the sharper printed characters and graphics.</p> <ul style="list-style-type: none"> • Select 300dpi-Draft to print a draft document. • If your print jobs are mostly text, select 600dpi-Normal for the highest quality printing. • Select 1200dpi-Best when your job contains bitmapped images, such as scanned photos or some graphics, that will benefit from enhanced line screening.
Darkness	<p>Values: Normal*, Light, Dark</p> <p>You can lighten or darken the print on the page by changing the toner density setting. The Normal setting usually produces the best result. Use the Light toner density setting to save toner.</p>
Image Enhance	<p>Values: Normal, Image Enhance, Text Enhance*</p> <p>This item enhances the print quality.</p> <ul style="list-style-type: none"> • Normal: Doesn't enhance the quality. • Image Enhance: Enhances bitmap images, like scanned pictures. • Text Enhance: Enhances letters and simple figures.

System Setup menu

Use the **System Setup** menu to configure a variety of printer features.

(*: the default setting)

Item	Explanation
Language	<p>Values: English*, FRANCAIS, Espanol, I. Portuguese, B. Portugues, Deutsch, Italiano, ...</p> <p>This setting determines the language of the text that appears on the control panel display and information printing.</p>
Power Save	<p>Values: 5 Min*, 10 Min, 15 Min, 30 Min, 45 Min</p> <p>When the printer does not receive data for an extended period of time, power consumption is automatically lowered. You can set how long the printer waits before going to power save mode.</p>
Auto Continue	<p>Values: Off, On*</p> <p>This item determines whether or not the printer continues printing when it detects the paper unmatched to your paper setting.</p> <ul style="list-style-type: none"> • Off: If a paper mismatch occurs, the message will remain on the display and the printer will remain off-line until you insert the correct paper. • On: If the paper is mismatched occurs, an error message will display. The printer will go offline for 30 seconds, then automatically clear the message and continue printing.
Jam Recovery	<p>Values: Off*, On</p> <p>This item determines how the printer behaves when a paper jam occurs.</p> <ul style="list-style-type: none"> • Off: The printer does not reprint pages. Printing performance might be increased with this setting. • On: The printer automatically reprints pages after you clear the paper jam.
Altitude Adj.	<p>Values: Low*, High</p> <p>You can optimize print quality according to your altitude.</p>

Item	Explanation
Auto CR	<p>Values: LF*, LF+CR</p> <p>This item allows you to append the required carriage return to each line feed.</p> <p>Refer to the following samples:</p> <div style="display: flex; justify-content: space-around; align-items: center;"> <div style="border: 1px solid black; padding: 5px; text-align: center;"> AA BB CC LF </div> <div style="border: 1px solid black; padding: 5px; text-align: center;"> AA BB CC LF+CR </div> </div>
Job Timeout	<p>Values: 0 ~ 1800 sec *15 sec</p> <p>You can set the length of time the printer waits before printing the last page of a print job that does not end with a command to print the page.</p> <p>When a print time-out occurs, the printer prints the page in the print buffer.</p>
Maintenance	<p>This item allows you to maintain your printer.</p> <ul style="list-style-type: none"> • Clean Drum: Cleans the OPC drum of the cartridge and produces a cleaning sheet with toner debris on it. • Clean Fuser: Cleans the fuser unit inside of the printer and produces a cleaning sheet with toner debris on it. • Supplies Life: This item allows you to check how many pages are printed and how much toner are left in the cartridge.
Clear Setting	<p>This menu item allows you to restore the printer's factory default settings.</p>

Emulation menu

Use the **Emulation** menu to configure printer language emulation.

(*: the default setting)

Item	Explanation
Emulation Type	<p>Values: Auto*, PCL, EPSON, HEXDUMP, PS3, IBM ProPrint</p> <p>The printer language defines how the computer communicates with the printer.</p> <p>If you select Auto, your printer can change the printer language automatically.</p>
Setup	<p>Values: PCL, PostScript, EPSON</p> <p>See the tables on page 2.5 to configure the printer language.</p>

PCL

This menu sets the PCL emulation configuration. You can set the font type, symbol type, lines per page, and point size.

(*: the default setting)

Item	Explanation
Typeface	<p>Values: PCL1* ~ PCL54</p> <p>You can select the standard font to be used in PCL emulation.</p> <ul style="list-style-type: none">PCL1~PCL7's interval between letters is fixed, and PCL8~PCL45's interval is proportional to the font type and point size. You can adjust the font size of PCL1~PCL7 using the Pitch item, and PCL8~PCL45 can do using Point Size item.PCL46~PCL54's interval and point size are fixed.
Symbol	<p>Values: ROMAN8 ~ PCCYRIL *PC8</p> <p>This item selects the symbol to be used in PCL emulation. The symbol is the group of numbers, marks, and special signs being used when printing letters.</p>
Point Size	<p>Values: 4.00 ~ 999.75 (0.25 unit) *12</p> <p>When you select one between PCL8 and PCL45 from the Typeface menu, you can determine the font size by setting the height of the characters in the font.</p>
Courier	<p>Values: Regular*, Dark</p> <p>This item lets you select the version of Courier font to use.</p>
Pitch	<p>Values: 0.44 ~ 99.99 (0.01 unit) *10</p> <p>When you select one between PCL1 and PCL7 from the Typeface menu, you can determine the font size by setting the number of characters that will print in one horizontal inch of type. The default value, 10 is the best size.</p>
Lines	<p>Values: 5 ~ 128 *60 (Letter), 64 (A4)</p> <p>This item allows you to set vertical spacing from 5 to 128 lines for the default paper size. The lines may differ according to the paper size and printing orientation.</p>

PostScript

This menu provides you with the Print PS Error menu item.

(*: the default setting)

Item	Explanation
Print PS Error	<p>Values: On, Off*</p> <p>You can select whether or not your printer prints an error list when a PS error occurs.</p> <ul style="list-style-type: none">Select On to print PS 3 emulation errors. If an error occurs, the job stops processing, the error message prints, and the printer flushes the job.If this menu is set to Off, the job is flushed without an indication of the error.

EPSON

This menu sets the EPSON emulation configuration.

(*: the default setting)

Item	Explanation
Font	<p>Values: SANSERIF*, ROMAN</p> <p>You can select the standard font will be used in EPSON emulation.</p>
Character Set	<p>Values: USA*, FRANCE, GERMANY, UK, DENMARK1, SWEDEN, ITALY, SPAIN1, JAPAN, NORWAY, DENMARK2, SPAIN2, LATIN</p> <p>This item allows you to select a character set of the desired language.</p>
Character Tab.	<p>Values: ITALIC, PC437US*, PC850</p> <p>This item selects the character set.</p>
Pitch	<p>Values: 10*, 12, 17.14, 20</p> <p>You can determine the font size by setting the number of characters that will print in one horizontal inch of type.</p>
LPI	<p>Values: 6*, 8</p> <p>You can set the number of lines printed in one vertical inch.</p>
Auto Wrap	<p>Values: Off, On*</p> <p>This item determines whether or not the printer automatically performs line feed when the data overflows the printable area of the print material.</p>

Network menu

This menu lets you configure the network interface installed in your printer. You can reset the network interface and print a configuration page.




Note

In the ML-3050 printer, this menu only appears when an optional network printer server is installed.

(*: the default setting)

Item	Explanation
TCP/IP	<p>Values: DHCP*, BOOTP, Static</p> <p>This item allows you to manually set the TCP/IP addresses or receive the addresses from the network.</p> <ul style="list-style-type: none">• DHCP: The DHCP server allots the IP address to you automatically.• BOOTP: The BOOTP server allots the IP address to you automatically.• Static: You can enter IP address, subnet mask, and gateway manually.
EtherTalk	<p>Values: Off*, On</p> <p>This item lets you select whether or not you use the EtherTalk protocol. Select On to use the protocol.</p>
NetWare	<p>Values: Auto*, 802.2, 802.3, Ethernet II, SNAP, off</p> <p>This item lets you select the IPX frame type.</p> <ul style="list-style-type: none">• Auto: You can set the frame type automatically.• 802.2: Select this value to use the IEEE 802.2 frame type.• 802.3: Select this value to use the IEEE 802.3 frame type.• Ethernet II: Select this value to use the Ethernet 2 frame type.• SNAP: Select this value to use the SNAP frame type.• Off: You can disable the netware protocol.
Ethernet Speed	<p>Values: Auto*, 10M Half, 10M Full, 100M Half, 100M Full</p> <p>This item allows you to select the ethernet speed.</p>

Item	Explanation
Wireless	<p>Values: SSID Type, Authentication, Encryption</p> <p>Configure the wireless network environments. See page 10.3.</p> <p> Note This menu only appears when an optional wireless network interface card has been installed.</p>
Clear Setting	<p>This item performs a simple reset and restores the factory default settings for the network configuration. This setting will only take effect after you have reset the printer.</p>
Network Info	<p>This item print a page showing the network parameters you set.</p>

Printing a demo page

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

ML-3050, ML-3051N

Press and hold **Demo** for about 2 seconds.

ML-3051N, ML-3051ND

- 1 Press **Menu** and then **OK** when **Information** appears.
- 2 Press the **Scroll** buttons until **Demo Page** appears and press **OK**.
A demo page prints out.

Changing the display language (ML-3051N, ML-3051ND only)

To change the language that is displayed on the control panel, follow these steps:

- 1 Press **Menu** until **System Setup** appears on the bottom line of the display and press **OK**.
- 2 Press **OK** when **Language** appears.
- 3 Press the **Scroll** buttons to select the language you want and press **OK**.
- 4 Press **Stop** to return to Standby mode.

Using toner save mode

Toner save mode allows the printer to use less toner on each page. Activating this mode extends the life of your toner cartridge and reduces your cost per page beyond what one would experience in the normal mode, but it reduces print quality. This setting is not available with the 1200 dpi setting.

There are two ways to enable this mode:

Using the control panel button

Press **Toner Save** on the control panel. The printer must be in Standby mode; the Status LED lights green and **Ready** is shown on the display, if you use the ML-3051N or ML-3051ND.

- If the button backlight is on, the mode is enabled and the printer uses less toner to print a page.
- If the button backlight is off, the mode is disabled and the printer prints in normal mode.

From the software application

You can set toner save mode from the printer properties window on your printer driver. See the **Software Section**.

3 Software overview

This chapter gives you an overview of the software that comes with your printer. Further details about installing and using the software are explained in the **Software Section**.

This chapter includes:

- **Supplied software**
- **Printer driver features**
- **System requirements**

Supplied software

You must install the printer and scanner software using the supplied CDs after you have set up your printer and connected it to your computer.

Each CD provides you with the following software:

CD	Contents	
printer software CD	Windows	<ul style="list-style-type: none">• Printer driver: Use this driver to take full advantage of your printer's features.• Smart Panel: This program allows you to monitor the printer's status and alerts you when an error occurs during printing.• Printing Settings Utility: This program is automatically installed when you install the printer driver.• User's Guide in PDF
	Linux	<ul style="list-style-type: none">• Printer driver: Use this driver to run your printer from a Linux computer and print documents.• Smart Panel: This program allows you to monitor the printer's status and alerts you when an error occurs during printing.
PostScript printer driver CD	Windows	<ul style="list-style-type: none">• Postscript Printer Description (PPD) file: Use the PostScript driver to print documents with complex fonts and graphics in the PostScript language.• User's Guide in PDF
	Macintosh	<ul style="list-style-type: none">• Postscript Printer Description (PPD) file: Use this file to run your printer from a Macintosh computer and print documents.• Smart Panel: This program allows you to monitor the printer's status and alerts you when an error occurs during printing.
network utilities CD	Windows	<ul style="list-style-type: none">• SyncThru™ Web Admin Service: Use this web-based program to remotely manage, monitor, and troubleshoot network printers.• Set IP: Use this program to set your printer's TCP/IP addresses.• Network Printer User's Guide in PDF

Printer driver features

Your printer drivers support the following standard features:

- Paper source selection
- Paper size, orientation and media type
- 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:

Feature	PCL 6	PostScript		
	Windows	Windows	Macintosh	Linux
Toner save	O	O	X	O
Print quality option	O	O	O	O
Poster printing	O	X	X	X
Multiple pages per sheet (N-up)	O	O	O	O (2, 4)
Fit to page printing	O	O	O	O
Scale printing	O	O	O	O
Different source for first page	O	X	O	O
Watermark	O	X	X	X
Overlay	O	X	X	X

System requirements

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

Windows

Item	Requirements		Recommended
Operating system	Windows 95/98/Me/NT 4.0/2000/XP/2003		
CPU	Windows 95/98/Me/NT 4.0/2000	Pentium II 400 MHz or higher	Pentium III 933 MHz
	Windows XP/2003	Pentium III 933 MHz or higher	Pentium IV 1 GHz
RAM	Windows 95/98/Me/NT 4.0/2000	64 MB or more	128 MB
	Windows XP/2003	128 MB or more	256 MB
Free disk space	Windows 95/98/Me/NT 4.0/2000	300 MB or more	1 GB
	Windows XP/2003	1 GB or more	5 GB
Internet Explorer	5.0 or higher		



Note

For Windows NT 4.0/2000/XP/2003, users who have an administrator right can install the software.

Linux

Item	Requirements
Operating system	<ul style="list-style-type: none">• Red Hat 8.0 ~ 9.0• Fedora Core 1 ~ 3• Mandrake 9.0 ~ 10.2• SuSE 8.2 ~ 9.2
Processor	Pentium IV 1 GHz or higher
RAM	256 MB or higher
Free disk page	1 GB or higher
Software	<ul style="list-style-type: none">• Linux Kernel 2.4 or higher• Glibc 2.2 or higher• CUPS• SANE



Notes

- It is necessary to claim swap partition of 300 MB or larger for working with large scanned images.
- The Linux scanner driver supports the optical resolution at maximum.

Macintosh

Item	Requirements
Operating system	Macintosh 10.3 (ML-3050), 8.6 ~ 9.2 and 10.1 ~ 10.4 (ML-3051N or ML-3051ND)
RAM	128 MB
Free disk space	200 MB
Connection	USB interface, Network interface

4 Network setup

This chapter gives you step-by-step instructions for setting up your printer for network connections.

This chapter includes:

- **Introduction**
- **Supported operating systems**
- **Configuring TCP/IP**
- **Configuring EtherTalk**
- **Configuring IPX frame types**
- **Setting Ethernet speed**
- **Restoring the network configuration**
- **Printing a network configuration page**

Introduction

Once you have connected your printer to a network with an RJ-45 Ethernet cable, you can share the printer with other network users.

You need to set up the network protocols on the printer to use it as your network printer. Protocols can be set up by the following two methods:

Via network administration programs

You can configure your printer's print server settings and manage the printer via the following programs that came with your printer:

- **SyncThru™ Web Admin Service:** A web-based printer management solution for network administrators. **SyncThru™ Web Admin Service** provides you with an efficient way of managing network devices and lets you remotely monitor and troubleshoot network printers from any site with corporate intranet access.
- **SyncThru™ Web Service:** A web server embedded to your network print server, which allows you to configure the network parameters necessary for the printer to connect to various network environments.
- **SetIP:** A utility program allowing you to select a network interface and manually configure the addresses for use with the TCP/IP protocol.

For further details, refer to the user's guide on the network utilities CD that came with your printer.

Via the control panel

You can set up the following basic network parameters through the printer's control panel:

- Configure TCP/IP
- Configure IPX frame types for NetWare
- Configure EtherTalk

Supported operating systems

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

Item	Requirements
Network interface	<ul style="list-style-type: none">• 10/100 Base-TX• IEEE 802.11 b/g Wireless LAN (optional)
Network operating system	<ul style="list-style-type: none">• Novell NetWare 4.x, 5.x, 6.x• Windows 95/98/Me/NT 4.0/2000/XP/2003• Various Linux OS• Macintosh OS 10.3 (ML-3050), 8.6 ~ 9.2 and 10.1 ~ 10.4 (ML-3051N, ML-3051ND)
Network protocols	<ul style="list-style-type: none">• NetWare IPX/SPX• TCP/IP on Windows• EtherTalk
Dynamic addressing server	<ul style="list-style-type: none">• DHCP, BOOTP

- IPX/SPX: Internet Packet eXchange/Sequenced Packet eXchange
- TCP/IP: Transmission Control Protocol/Internet Protocol
- DHCP: Dynamic Host Configuration Protocol
- BOOTP: Bootstrap Protocol

Configuring TCP/IP

Your printer can be set up with a variety of TCP/IP network information, such as an IP address, a subnet mask, a gateway, and DNS addresses. There are several ways in which your printer can be assigned a TCP/IP address, depending on your network.

- **Static addressing:** A TCP/IP address is assigned manually by the system administrator.
- **Dynamic addressing via BOOTP/DHCP (default):** A TCP/IP address is assigned automatically by the server.



Note

Before configuring TCP/IP, you need to set the network protocol to TCP/IP.

Static addressing

To enter a TCP/IP address from your printer's control panel, take the following step:

- 1 Press **Menu** until **Network** appears on the bottom line of the display and press **OK**.
- 2 Press **OK** when **TCP/IP** appears.
- 3 Press the **Scroll** buttons until **Static** appears and press **OK**.
- 4 Press **OK** when **IP Address** appears.
- 5 Set the first byte between 0 and 255 using the **Scroll** buttons and press **OK** to move to the next byte.
Repeat this to complete the address from the 1st byte to the 4th byte.
- 6 When you have finished, press **OK**.
- 7 Repeat step 5 and 6 to configure the other TCP/IP parameters: subnet mask and gateway address.
- 8 Press **Stop** to return to Standby mode.

Dynamic addressing (BOOTP/DHCP)

To have a TCP/IP address assigned automatically by the server, take the following step:

- 1 Press **Menu** until **Network** appears on the bottom line of the display.
- 2 Press **OK** when **TCP/IP** appears.
- 3 Press the **Scroll** buttons until **DHCP** or **BOOTP** appears and press **OK**.
- 4 Press **Stop** to return to Standby mode.

Configuring EtherTalk

EtherTalk is AppleTalk used in an Ethernet network. This protocol is widely used in Macintosh network environments. To use EtherTalk, take the following step:

- 1 Press **Menu** until **Network** appears on the bottom line of the display and press **OK**.
- 2 Press the **Scroll** buttons until **EtherTalk** appears and press **OK**.
- 3 Press the **Scroll** buttons until **On** appears and press **OK**.
- 4 Press **Stop** to return to Standby mode.

Configuring IPX frame types

To use IPX/SPX protocol networks (for example, Novell NetWare), the format of the network communication frames must be specified for the printer. In most cases, you can keep the **Auto** setting. However, you can manually set the frame type format, if required. Take the following step to change the frame type format:

- 1 Press **Menu** until **Network** on the bottom line of the display and press **OK**.
- 2 Press the **Scroll** buttons until **NetWare** appears and press **OK**.
- 3 Press the **Scroll** buttons until the desired frame type appears.
 - **Auto**: Automatically senses and limits the frame type to the first one detected.
 - **802.2**: Limits the frame type to IPX over IEEE 802.2 with IEEE 802.3 frames. All others will be discarded.
 - **802.3**: Limits the frame type to IPX over IEEE 802.3 frames. All others will be discarded.
 - **Ethernet II**: Limits the frame type to IPX over Ethernet Frames. All others will be discarded.
 - **SNAP**: Limits the frame type to IPX over SNAP with IEEE 802.3 frames. All others will be discarded.
 - **Off**: The IPX/SPX protocol is disabled.
- 4 Press **OK** to save the selection.
- 5 Press **Stop** to return to Standby mode.

Setting Ethernet speed

You can select the communication speed for Ethernet connections.

- 1 Press **Menu** until **Network** appears on the bottom line of the display and press **OK**.
- 2 Press the **Scroll** buttons until **Ethernet Speed** appears and press **OK**.
- 3 Press the **Scroll** buttons until the speed you want appears and press **OK**.
- 4 Press **Stop** to return to Standby mode.

Restoring the network configuration

You can return the network configuration to its default settings.

- 1 Press **Menu** until **Network** appears on the bottom line of the display and press **OK**.
- 2 Press the **Scroll** buttons until **Clear Setting** appears and press **OK**.
- 3 Press **OK** when **Yes** appears to restore the network configuration.
- 4 Power the printer off and back on.

Printing a network configuration page

The network configuration page shows how the network interface card on your printer is configured.

- 1 Press **Menu** until **Network** appears on the bottom line of the display and press **OK**.
- 2 Press the **Scroll** buttons until **Network Info** appears and press **OK**.
- 3 Press **OK** when **Yes** appears.

The network configuration page prints out.

5 Loading print media

This chapter will help you understand types of paper you can use with your printer and how to properly load paper in the different paper trays for the best print quality.

This chapter includes:

- **Selecting print media**
- **Loading paper**
- **Selecting an output location**

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 meet the guidelines for use with your printer. 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 printer.

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

- **Desired outcome:** The print media you choose should be appropriate for your project.
- **Size:** You can use any size media that fits easily within the paper adjusters of the paper tray.
- **Weight:** Your printer supports print media weights as follows:
 - 16 to 24 lb (60 to 90 g/m²) bond for the tray 1 and optional tray 2
 - 16 to 43 lb (60 to 163 g/m²) bond for the multi-purpose tray
 - 20 to 24 lb (75 to 90 g/m²) for the duplex printing (ML-3051ND only)
- **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.



Notes

- Some print media may meet all of the guidelines in this section and still not produce satisfactory results. This may be the result of improper handling, unacceptable temperature and humidity levels, or other variables over which Samsung has no control.
- Before purchasing large quantities of print media, ensure that it meets the requirements specified in this user's guide.



Caution

Using print media that does not meet these specifications may cause problems, requiring repairs. Such repairs are not covered by Samsung's warranty or service agreements.

Supported sizes of paper

Type	Size	Dimensions	Weight ^a	Capacity ^b
Plain paper	Letter	215.9 x 279 mm (8.5 x 11 inches)	<ul style="list-style-type: none"> 60 to 90 g/m² bond (16 to 24 lb) for the tray 60 to 163 g/m² bond (16 to 43 lb) for the multi-purpose tray 	<ul style="list-style-type: none"> 250 sheets of 75 g/m² (20 lb) bond paper for the tray 50 sheets for the multi-purpose tray
	Legal	215.9 x 355.6 mm (8.5 x 14 inches)		
	Folio	216 x 330.2 mm (8.5 x 13 inches)		
	Oficio	216 x 343 mm (8.5 x 13.5 inches)		
	A4	210 x 297 mm (8.27 x 11.69 inches)		
	JIS B5	182 x 257 mm (7.18 x 10.12 inches)		
	ISO B5	176 x 250 mm (6.93 x 9.84 inches)		
	Executive	184.2 x 266.7 mm (7.25 x 10.5 inches)		
	A5	148.5 x 210 mm (5.85 x 8.27 inches)		
	A6	105 x 148.5 mm (4.13 x 5.85 inches)		
Envelope	Envelope B5	176 x 250 mm (6.93 x 9.84 inches)	75 to 90 g/m ² (20 to 24 lb)	5 sheets of 75 g/m ² (20 lb) in the multi-purpose tray
	Envelope Monarch	98.4 x 190.5 mm (3.88 x 7.5 inches)		
	Envelope COM-10	105 x 241 mm (4.12 x 9.5 inches)		
	Envelope DL	110 x 220 mm (4.33 x 8.66 inches)		
	Envelope C5	162 x 229 mm (6.38 x 9.02 inches)		
	Envelope C6	114 x 162 mm (4.49 x 6.38 inches)		
Transparency	Letter, A4	Refer to the Plain paper section	138 to 146 g/m ²	5 sheets of 75 g/m ² (20 lb) in the multi-purpose tray
Labels	Letter, Legal, Folio, Oficio, A4, JIS B5, ISO B5, Executive, A5, A6	Refer to the Plain paper section	120 to 150 g/m ² (32 to 40 lb)	5 sheets of 75 g/m ² (20 lb) in the multi-purpose tray
Card stock	Letter, Legal, Folio, Oficio, A4, JIS B5, ISO B5, Executive, A5, A6	Refer to the Plain paper section	60 to 163 g/m ² (16 to 43 lb)	5 sheets of 75 g/m ² (20 lb) in the multi-purpose tray
Minimum size (custom)		98 x 148 mm (3.86 x 5.83 inches)	60 to 163 g/m ² bond (16 to 43 lb)	5 sheets of 75 g/m ² (20 lb) in the multi-purpose tray
Maximum size (custom)		215.9 x 356 mm (8.5 x 14 inches)		

a. If media weight is over 24 lb (90 g/m²), use the multi-purpose tray.

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



Note

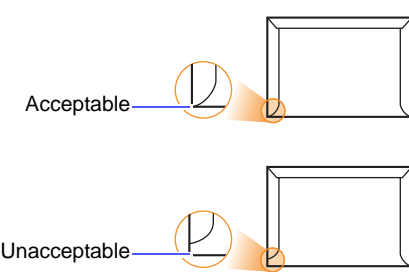
For duplex printing, A4, Letter, Oficio, Legal, and Folio sizes are supported.

Guidelines for selecting and storing print media

When selecting or loading paper, envelopes, or other print materials, keep these guidelines in mind:

- Always use print media that conform with the specifications listed on page 5.3.
- Attempting to print on damp, curled, wrinkled, or torn paper can cause paper jams and poor print quality.
- For the best print quality, use only high quality copier grade paper specifically recommended for use in laser printers.
- Avoid using the following media types:
 - Paper with embossed lettering, perforations, or a texture that is too smooth or too rough
 - Erasable bond paper
 - Multi-paged paper
 - Synthetic paper and thermally reactive paper
 - Carbonless paper and Tracing paper.
- Use of these types of paper could result in paper jams, chemical smells, and damage to your printer.
- Store print media in its ream wrapper until you are ready to use it. Place cartons on pallets or shelves, not on the floor. Do not place heavy objects on top of the paper, whether it is packaged or unpackaged. Keep it away from moisture or other conditions that can cause it to wrinkle or curl.
- Store unused print media at temperatures between 15° C and 30° C (59° F to 86° F). The relative humidity should be between 10% and 70%.
- Store unused print media in a moisture-proof wrap, such as a plastic container or bag, to prevent dust and moisture from contaminating your paper.
- Load special media types one sheet at a time through the multi-purpose tray to avoid paper jams.
- To prevent print media, such as transparencies and label sheets, from sticking together, remove them as they print out.

Guidelines for special print media

Media type	Guidelines
Envelopes	<ul style="list-style-type: none"> • Successful printing on envelopes depends upon the quality of the envelopes. When selecting envelopes, consider the following factors: <ul style="list-style-type: none"> - Weight: The weight of the envelope paper should not exceed 90 g/m² (24 lb) or jamming may occur. - Construction: Prior to printing, envelopes should lie flat with less than 6 mm (0.25 inches) curl, and should not contain air. - Condition: Envelopes should not be wrinkled, nicked, or otherwise damaged. - Temperature: You should use envelopes that are compatible with the heat and pressure of the printer 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.  <ul style="list-style-type: none"> • Envelopes with a peel-off adhesive strip or with more than one flap that folds over to seal must use adhesives compatible with the printer's fusing temperature of 200° C (392° 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 (0.6 inches) from the edges of the envelope. • Avoid printing over the area where the envelope's seams meet.

Media type	Guidelines
Transparencies	<ul style="list-style-type: none"> To avoid damaging the printer, use only transparencies designed for use in laser printers. Transparencies used in the printer must be able to withstand 200° C (392° F), the printer's fusing temperature. Place them on a flat surface after removing them from the printer. Do not leave them 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 them carefully. To avoid fading, do not expose printed transparencies to prolonged sunlight. Ensure that transparencies are not wrinkled, curled, or have any torn edges.
Labels	<ul style="list-style-type: none"> To avoid damaging the printer, use only labels designed for use in laser printers. When selecting labels, consider the following factors: <ul style="list-style-type: none"> - Adhesives: The adhesive material should be stable at 200° C (392° F), the printer's fusing temperature. - 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 (5 inches) 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 printer components. Do not run a sheet of labels through the printer more than once. The adhesive backing is designed for only a single pass through the printer. Do not use labels that are separating from the backing sheet or are wrinkled, bubbled, or otherwise damaged.
Card stock or custom-sized materials	<ul style="list-style-type: none"> Do not print on media smaller than 76 mm (3 inches) wide or 127 mm (5 inches) long. In the software application, set margins at least 6.4 mm (0.25 inches) away from the edges of the material.

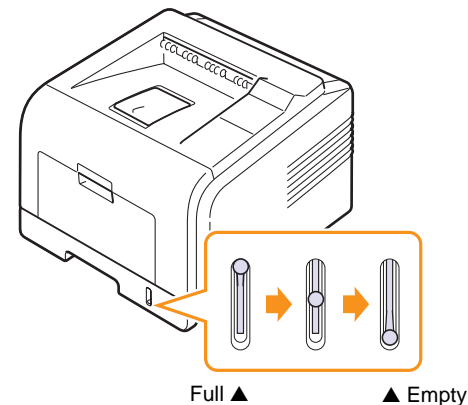
Media type	Guidelines
Preprinted paper	<ul style="list-style-type: none"> Letterhead must be printed with heat-resistant ink that will not melt, vaporize, or release hazardous emissions when subjected to the printer's fusing temperature of 205° C (400° F) for 0.1 second. Letterhead ink must be non-flammable and should not adversely affect printer rollers. Forms and letterhead should be sealed in a moisture-proof wrapping to prevent changes during storage. Before you load preprinted paper, such as forms and letterhead, verify that the ink on the paper is dry. During the fusing process, wet ink can come off preprinted paper, reducing print quality.

Loading paper

Load the print media you use for the majority of your print jobs in the tray 1. The tray 1 can hold a maximum of 250 sheets of 20 lb plain paper.

You can purchase an optional tray (tray 2) and attach it below the standard tray to load an additional 250 sheets of paper. For order information for an optional tray, see page 7.1.

The paper level indicator on the front of the tray 1 and the optional tray 2 shows the amount of paper currently left in the tray. When the tray is empty, the indicator of the bar is completely lowered.

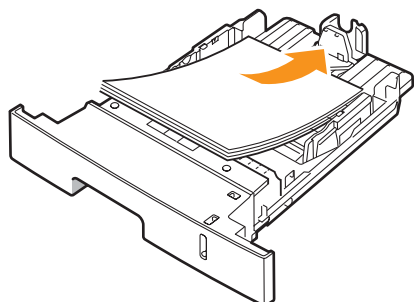


Using the tray 1 or the optional tray 2

Use the print material you use for the majority of your print jobs in the tray 1. The tray 1 can hold a maximum of 250 sheets of 75 g/m² paper.

You can purchase an optional tray 2 and attach it below the tray 1 to load an additional 250 sheets of paper.

To load paper, pull open the tray and load paper with the side to be printed on face down.



You can load letterhead paper with the design side face down. The top edge of the sheet with the logo should be placed at the front of the tray.

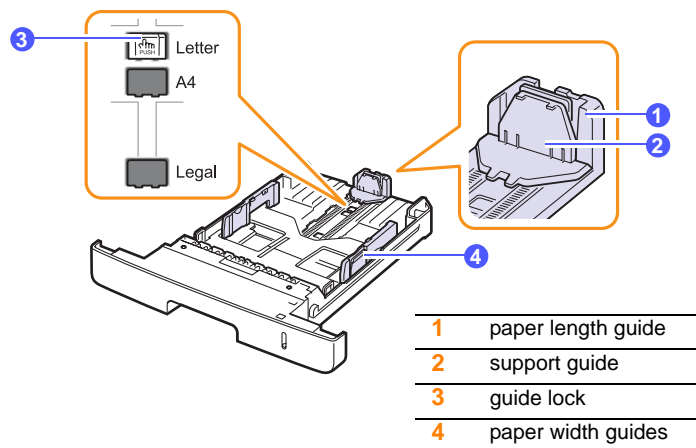


Notes

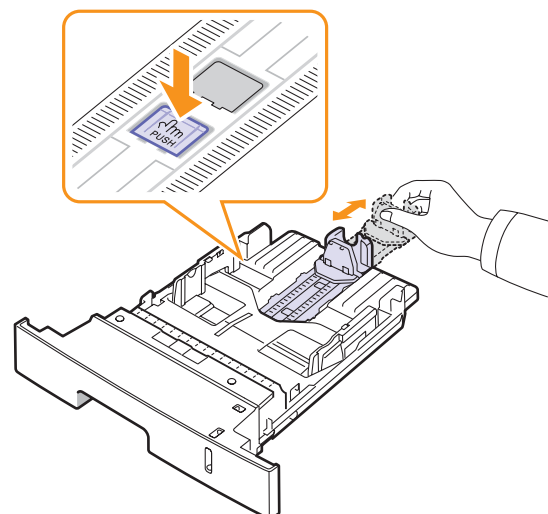
- If you experience problems with paper feed, place one sheet at a time in the multi-purpose tray.
- You can load previously printed paper. The printed side should be facing up with an uncurled edge at the front. If you experience problems with paper feed, turn the paper around. Note that the print quality is not guaranteed.

Changing the size of the paper in the tray 1

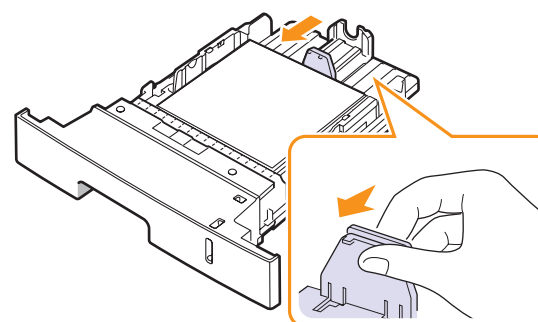
To load longer sizes of paper, such as Legal-sized paper, you need to adjust the paper guides to extend the paper tray.



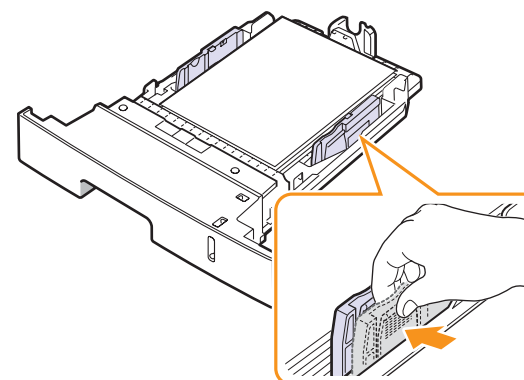
- 1 Press and hold the guide lock, and slide the paper length guide to locate it in the correct paper size slot.



- 2 After inserting paper into the tray, adjust the support guide so that it lightly touches the paper stack.



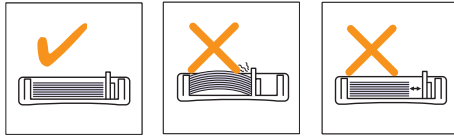
- 3 Squeeze the paper width guides, as shown and slide them to the stack of paper until it lightly touches the side of the stack.





Notes

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

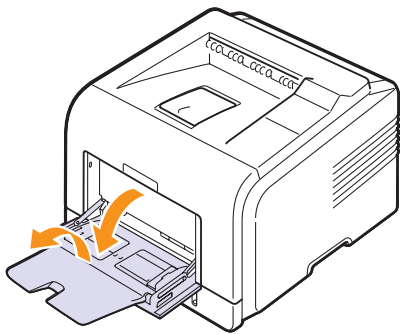


Using the multi-purpose tray

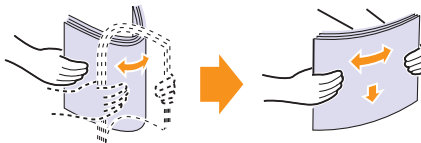
The multi-purpose tray can hold special sizes and types of print material, such as transparencies, postcards, note cards, and envelopes. It is useful for single page printing on letterhead or colored paper.

To load paper in the multi-purpose tray:

- 1 Open the multi-purpose tray and unfold the multi-purpose tray extension, as shown.

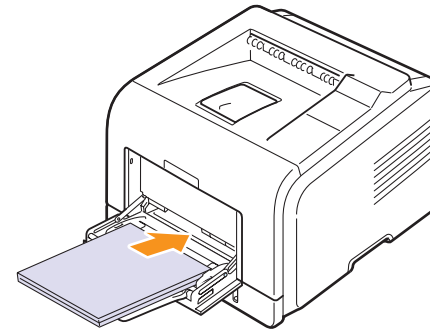


- 2 If you are using paper, flex or fan the edge of the paper stack to separate the pages before loading.



For transparencies, hold them by the edges and avoid touching the print side. Oils from your fingers can cause print quality problems.

- 3 Load the paper **with the side to be printed on facing up**.



Depending on the media type you are using, keep the following loading guidelines:

- Envelopes: Flap side down and with the stamp area on the top left side.
- Transparencies: Print side up and the top with the adhesive strip entering the printer first.
- Labels: Print side up and top short edge entering the printer first.
- Preprinted paper: Design side up with the top edge toward the printer.
- Card stock: Print side up and the short edge entering the printer first.
- Previously printed paper: Previously printed side down with an uncurled edge toward the printer.



Note

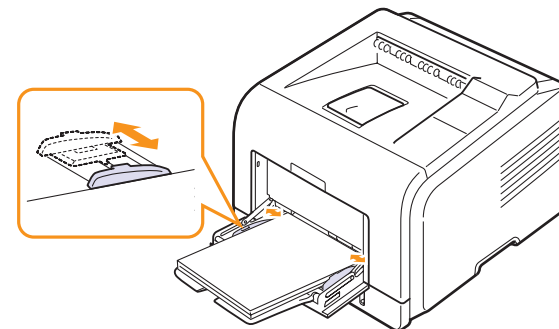
Make sure that you have not loaded too much print material. The print material buckles if you load a stack that is too deep or if you push it in too far.



Caution

When you print on special material like envelopes, labels, transparencies, or cards, the output location should be the rear cover. Open the rear cover to use it. See page 5.8.

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



- 5 When you print a document, set the paper source and type in the software application. See the **Software Section**.

For information about setting the paper source and type on the control panel, see page 2.3.

- 6 After printing, fold the multi-purpose tray extension and close the multi-purpose tray.

Tips on using the multi-purpose tray

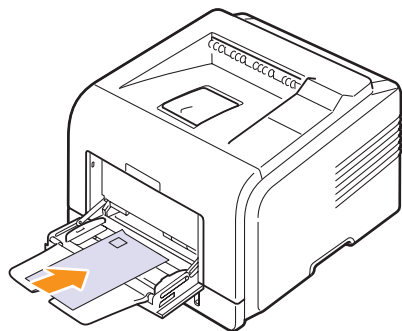
- Load only one size of print media at a time in the multi-purpose tray.
- To prevent paper jams, do not add paper when there is still paper in the multi-purpose tray. This also applies to other types of print media.
- Print media should be loaded face up with the top edge going into the multi-purpose tray first and be placed in the center of the tray.
- Always load only the print media specified in page 5.1 to avoid paper jams and print quality problems.
- Flatten any curl on postcards, envelopes, and labels before loading them into the multi-purpose tray.
- When you print on 76 mm x 127 mm (3 x 5 inches) sized media on the multi-purpose tray, open the rear cover for straight paper path to avoid paper jams.
- Make sure to open the rear cover when you print on transparencies. If not, they may tear while exiting the printer.

Using manual feed mode

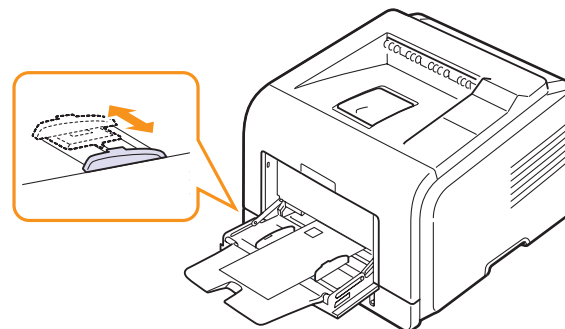
You can manually load a sheet of print material in the multi-purpose tray if you select **Manual Feed** in the **Source** option from the **Paper** tab when you change print settings to print a document. See the **Software Section**. Manually loading paper can be helpful when you want to check the print quality after each page is printed.

This loading procedure is almost the same as the procedure for loading in the multi-purpose tray, except you load paper sheet-by-sheet in the tray, send print data to print the first page, and press **Stop** (if you use the ML-3050) or **OK** (if you use the ML-3051N or ML-3051ND) on the control panel to print each following page.

- 1 Load the paper **with the side to be printed on facing up**.



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



- 3 When you print a document, set the paper source to **Manual Feed** and select the appropriate paper size and type in the software application. See the **Software Section**.
- 4 Print a document.

The display shows a message prompting you to load paper and press **Stop** (if you use the ML-3050) or **OK** (if you use the ML-3051N or ML-3051ND).

- 5 Press **Stop** or **OK**.

The printer picks up the print material and prints. After one page is printed, the message appears again.



Note

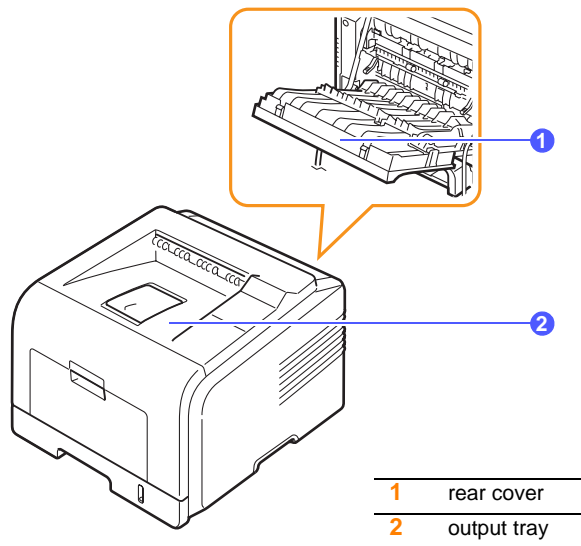
If you do not press the button, after a pause the printer will automatically pick the print material.

- 6 Insert the next sheet into the multi-purpose tray and press **Stop** or **OK**.

Repeat this step for every page to be printed.

Selecting an output location

The printer has two output locations; the rear cover (face up) and the output tray (face down).



The printer sends output to the output tray by default. To use the output tray, make sure that the rear cover is closed.



Notes

- If paper coming out of the output tray has problems, such as excessive curl, try printing to the rear cover.
- To avoid paper jams, do not open or close the rear cover while the printer is printing.

Printing to the output tray (Face down)

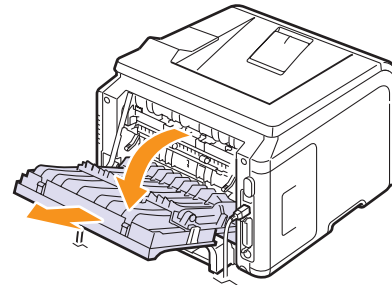
The output tray collects paper face down, in the order in which the sheets were printed. The tray should be used for most print jobs.

Printing to the rear cover (Face up)

Using the rear cover, paper comes out of the printer **face up**.

Printing from the multi-purpose tray to the rear cover provides a straight paper path. Using the rear cover might improve the output quality with special print media.

To use the rear cover, open it by pulling down.



Caution

The fuser area inside the rear cover of your printer becomes very hot when in use. Take care when you access this area.

6 Basic printing

This chapter explains common printing tasks.

This chapter includes:

- **Printing a document**
- **Canceling a print job**

Printing a document

This printer 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.

For details about printing, see the **Software Section**.

Canceling a print job

If the print job is waiting in a print queue or print spooler, such as the printer group in Windows, delete the job as follows:

- 1 Click the Windows **Start** button.
- 2 For Windows 98SE/NT 4.0/2000/Me, select **Settings** and then **Printers**.
For Windows XP/2003, select **Printers and Faxes**.
- 3 Double-click the **Samsung ML-305x Series PCL6** or **Samsung ML-305x Series PS** icon.
- 4 From the Document menu, select **Cancel Printing** (Windows 95/98/Me) or **Cancel** (Windows NT 4.0/2000/XP/2003).



Note

You can access this window simply by double-clicking the printer icon at the bottom right corner of the Windows desktop.

You can also cancel the current job by pressing **Stop** on the control panel of your printer.

7 Ordering supplies and accessories

This chapter provides information on purchasing toner cartridges and accessories available for your printer.

- **Toner cartridges**
- **Accessories**
- **How to purchase**

Toner cartridges

When the toner runs out, you can order the following types of toner cartridges for your printer:

Type	Yield ^a	Part number
Standard yield	4,000 pages	SCX-D5530A
High yield	8,000 pages	SCX-D5530B

a. ISO 19752 5% coverage

Accessories

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

The following accessories are available for your printer:

Accessory	Description	Part number
Optional tray	If you are experiencing frequent paper supply problems, you can attach an additional 250 sheet tray. You can print documents on various sizes and types of print materials.	SCX-S5530A
Memory DIMM	Extends your printer's memory capacity.	<ul style="list-style-type: none">• ML-00MA: 16 MB• ML-00MB: 32 MB• ML-00MC: 64 MB• ML-00MD: 128 MB• ML-MEM140: 256 MB
IEEE 802.11 b/g Wireless LAN card ^a	Allows you to connect your printer to a wireless network and share it with other people over the network.	ML-NWA10L

Accessory	Description	Part number
Ethernet 10/100 Base TX Wired Network Printer Server	Allows you to connect your printer to a wireless network using server.	ML-00ND
802.11b Wireless Network Printer Server	Allows you to connect your printer to a wireless network using server.	ML-00NA

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.

How to purchase

To order Samsung-authorized supplies or accessories, contact your local Samsung dealer or the retailer where you purchased your printer, or visit www.samsungprinter.com and select your country/region for information on calling for technical support.

8 Maintenance

This chapter provides information for maintaining your printer and the toner cartridge, as well as suggestions for high-quality and economical printing.

This chapter includes:

- **Printing information page**
- **Cleaning the printer**
- **Maintaining the toner cartridge**
- **Maintenance parts**

Printing information page

From the printer's control panel, you can print pages that give detailed information about the printer. They can help you maintain your printer.

In the ML-3051N and ML-3051ND

- 1 Press **Menu** until **Information** appears on the bottom line of the display and press **OK**.
- 2 Press the **Scroll** buttons until the information page you want appears and press **OK**.
A page prints out.

In the ML-3050

The configuration page to view the current settings, to help troubleshoot problems, or to verify the installation of optional accessories can be printed.

Press and hold down **Stop** for about 6 seconds.

Cleaning the printer

During the printing process, paper, toner, and dust particles can accumulate inside the printer. This buildup can cause print quality problems, such as toner specks or smearing. Your printer has a cleaning mode that can correct and prevent these types of problems.

Cleaning the outside of the printer

Clean the cabinet of the printer with a soft, lint-free cloth. You can dampen the cloth slightly with water, but be careful not to let any water drip onto or into the printer.



Caution

Cleaning the cabinet of the printer with cleaning materials containing large amounts of alcohol, solvents, or other strong substances can discolor or crack the cabinet.

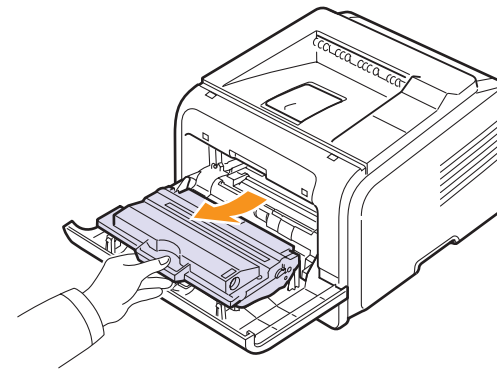
Cleaning the inside of the printer

There are two methods to clean the inside of the printer:

- Clean the inside manually.
- Print a cleaning sheet, which can be done from the control panel.

Cleaning the Inside of the printer manually

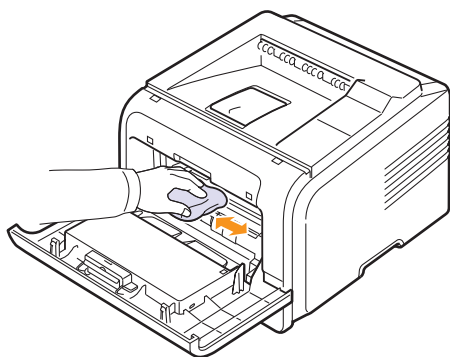
- 1 Turn the printer off and unplug the power cord. Wait for the printer to cool down.
- 2 Open the front cover and pull the toner cartridge out. Set it on a clean flat surface.



Cautions

- To prevent damage to the toner cartridge, do not expose it to light for more than a few minutes. Cover it with a piece of paper, if necessary.
- Do not touch the green surface underside of the toner cartridge. Use the handle on the cartridge to avoid touching this area.

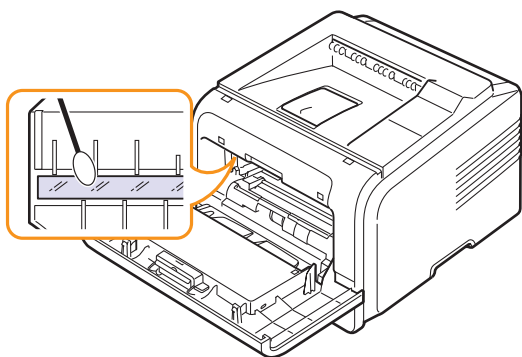
- 3 With a dry lint-free cloth, wipe away any dust and spilled toner from the toner cartridge area and the toner cartridge cavity.



Caution

While cleaning the inside of the printer, be careful not to touch the transfer roller, located underneath the toner cartridge. Oil from your fingers can cause print scan quality problems.

- 4 Locate the long strip of glass (LSU) inside the top of the cartridge compartment, and gently swab the glass to see if dirt turns the white cotton black.



- 5 Reinsert the toner cartridge and close the front cover.
- 6 Plug in the power cord and turn the printer on.

Printing a cleaning sheet

If you are experiencing blurred, faded, or smeared printouts, you can clear the problem by printing a cleaning sheet, provided by your printer. You can print:

- OPC Cleaning sheet: cleans the OPC drum of the toner cartridge.
- Fuser Cleaning sheet: cleans the fuser unit inside the printer.

In the ML-3050, press and hold down **Stop** for about 10 seconds to print a OPC cleaning sheet.

In the ML-3051N and ML-3051ND, this process will produce a page with toner debris, which should be discarded.

- 1 Make sure that the printer is turned on with paper loaded in the tray.
- 2 Press **Menu** until **System Setup** appears on the bottom line of the display and press **OK**.
- 3 Press the **Scroll** buttons until **Maintenance** appears and press **OK**.
- 4 When **Clean Drum** appears, press **OK**.

Or, press the **Scroll** buttons until **Clean Drum** or **Clean Fuser** appears and press **OK**.

Your printer automatically picks up a sheet of paper from the tray and prints out a cleaning sheet with dust or toner particles on it.

Maintaining the toner cartridge

Toner cartridge storage

To get the most from the toner cartridge, keep the following guidelines in mind:

- Do not remove the toner cartridge from its package until ready for use.
- Do not refill the toner cartridge. The printer warranty does not cover damage caused by using a refilled cartridge.
- Store toner cartridge in the same environment as the printer.
- To prevent damage to the toner cartridge, do not expose it to light for more than a few minute.

Expected cartridge life

The life of the toner cartridge depends on the amount of toner that print jobs require. When printing text at ISO 19752 5% coverage, a new toner cartridge lasts an average of either 8,000 or 4,000 pages. (The original toner cartridge supplied with the printer lasts an average of 4,000 pages.) The actual number may also be different depending on the print density of the pages you print on, and the number of pages may be affected by operating environment, printing interval, media type, and media size. If you print a lot of graphics, you may need to change the cartridge more often.

Saving Toner

To save toner, press **Toner Save** on the control panel. The button backlight turns on.

Using this feature extends the life of the toner cartridge and reduce your cost per page, but it also reduces print quality.

Checking the remaining toner

(ML-3051N, ML-3051ND only)

You can check the level of toner left in the cartridge.

If you are having print quality problems, this can help you determine if the problem is caused by low toner.

- 1 Press **Menu** until **System Setup** appears on the bottom line of the display press **OK**.
- 2 Press the **Scroll** buttons until **Maintenance** appears and press **OK**.
- 3 Press the **Scroll** buttons until **Supplies Life** appears and press **OK**.
- 4 Press the **Scroll** buttons to access **Toner Remains** and press **OK**.
The display shows the percentage of the remaining toner.

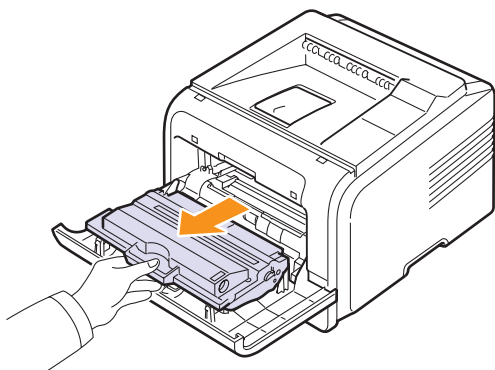
Redistributing toner cartridge

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

- White streaks or light printing occurs.
- **Toner Low** appears on the display. (ML-3051N, ML-3051ND only)
- The Smart Panel program window appears on the computer telling you that the toner level is low.
- The Status LED blinks red.

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

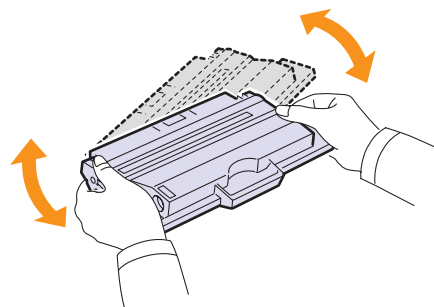
- 1 Open the front cover.
- 2 Pull the toner cartridge out.



Cautions

- Avoid reaching too far into the printer. The fusing area may be hot.
- To prevent damage to the toner cartridge, do not expose it to light for more than a few minutes. Cover it with a piece of paper, if necessary.
- Do not touch the green surface underside of the toner cartridge. Use the handle on the cartridge to avoid touching this area.

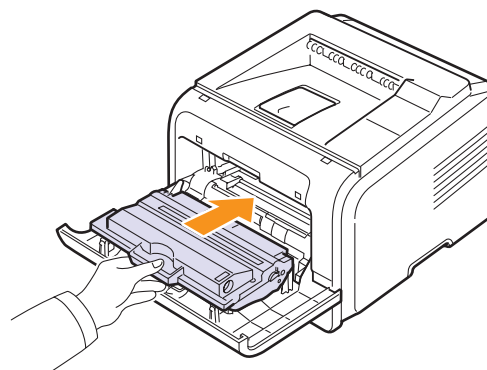
- 3 Thoroughly roll the cartridge 5 or 6 times to distribute the toner evenly inside the cartridge.



Note

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

- 4 Hold the toner cartridge by the handle and slowly insert the cartridge into the opening in the printer.
- 5 Tabs on the sides of the cartridge and corresponding grooves within the printer will guide the cartridge into the correct position until it locks into place completely.



- 6 Close the front cover. Make sure that the cover is securely closed.

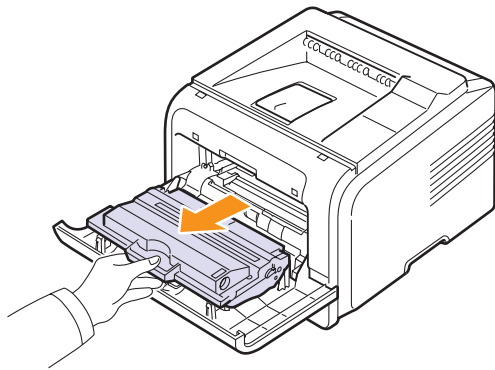
Replacing the toner cartridge

When the toner cartridge is completely empty:

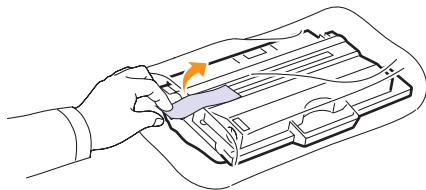
- **Toner Empty** appears on the display. (ML-3051N, ML-3051ND only)
- The **Smart Panel** program window appears on the computer telling you that the toner cartridge is empty.
- The Status LED lights red.

At this stage, the toner cartridge needs to be replaced. For order information for toner cartridges, see page 7.1.

- 1 Open the front cover.
- 2 Pull the toner cartridge out.



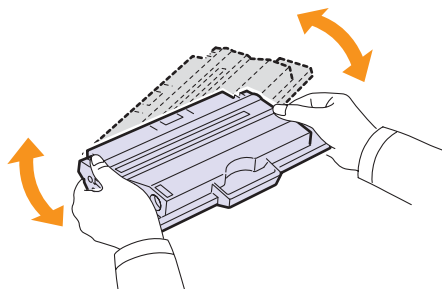
- 3 Remove the new toner cartridge from its bag.



Caution

Do not use sharp objects, such as a knife or scissors, to open the toner cartridge package. They might scratch the drum of the cartridge.

- 4 Remove the packing tape and roll the cartridge 5 or 6 items to distribute the toner.



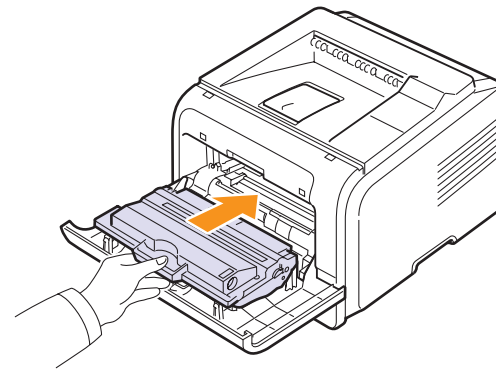
Thoroughly roll the cartridge to assure maximum copies per cartridge. Save the box and the plastic bag for shipping.



Cautions

- If toner gets on your clothing, wipe it off with a dry cloth and wash clothing in cold water. Hot water sets toner into fabric.
- To prevent damage to the toner cartridge, do not expose it to light for more than a few minutes. Cover it with a piece of paper, if necessary.
- Do not touch the green surface underside of the toner cartridge. Use the handle on the cartridge to avoid touching this area.

- 5 Hold the toner cartridge by the handle and slowly insert the cartridge into the opening in the printer.
- 6 Tabs on the sides of the cartridge and corresponding grooves within the printer will guide the cartridge into the correct position until it locks into place completely.



- 7 Close the front cover. Make sure that the cover is securely closed.

Maintenance parts

To avoid print quality and paper feed problems resulting from worn parts and to maintain your printer in top working condition the following items will need to be replaced at the specified number of pages or when the life span of each item has expired.

Items	Yield (Average)
Transfer roller	70,000
Pick-up roller	150,000
Fuser unit	80,000

Samsung highly recommends that an authorized service provider, dealer or the retailer where you bought printer performs this maintenance activity.

9 Troubleshooting

This chapter provides helpful information for what to do if you encounter an error while using your printer.

This chapter includes:

- **Clearing paper jams**
- **Troubleshooting checklist**
- **Understanding the status LED**
- **Understanding display messages**
- **Solving general printing problems**
- **Solving print quality problems**
- **Common Windows problems**
- **Common Macintosh problems**
- **Common PostScript problems**
- **Common Linux problems**

Clearing paper jams



Note

When removing paper that is jammed in the printer, if possible always pull the paper in the direction that it normally moves so as not to damage internal components. Always pull firmly and evenly; do not jerk the paper. If the paper tears, ensure that all fragments of paper are removed; otherwise a jam will occur again.

When a paper jam occurs, the Status LED lights red. Open and close the front cover. The jammed paper automatically exit the printer.

If the paper does not exit, check the display on the control panel. The message indicating the corresponding location of the paper jam appears. Refer to the table below to locate the paper jam and to clear it:

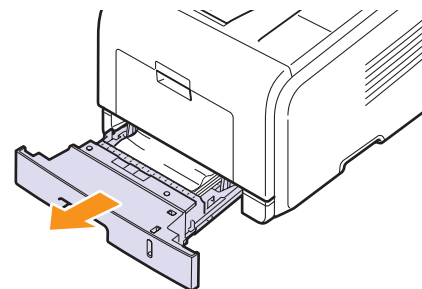
Message	Location of Jam	Go To
Paper Jam 0 Open/Close Door	In the paper feed area (Tray 1, Tray 2, Multi-Purpose Tray)	below
Paper Jam 1 Open/Close Door	Around the toner cartridge	page 9.3
Paper Jam 2 Check Inside	In the paper exit area	page 9.3
Duplex Jam 0 Check Inside^a	In the duplex area	page 9.4
Duplex Jam 1 Open/Close Door^a	In the duplex area	page 9.5

a. ML-3051ND only

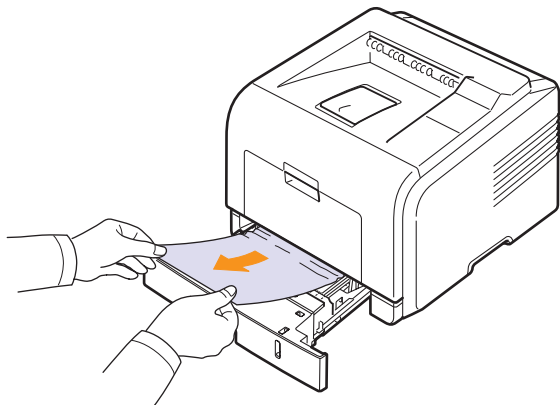
In the paper feed area

In the tray 1

- 1 Pull the tray 1 open.



- 2 Remove the jammed paper by gently pulling it straight out. Make sure that all of the paper is properly aligned in the tray 1.

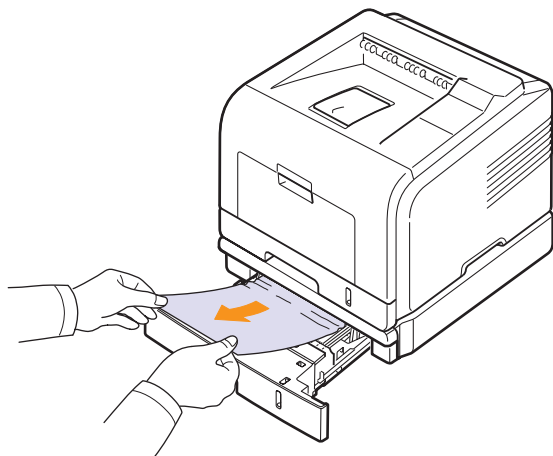


If the paper does not move when you pull, or if you do not see the paper in this area, check the fuser area around the toner cartridge. See page 9.3.

- 3 Insert the tray 1 into the printer until it snaps into place. Printing automatically resumes.

In the optional tray 2

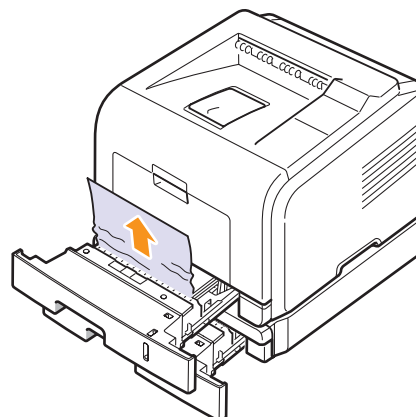
- 1 Pull the optional tray 2 open.
- 2 Remove the jammed paper from the printer.



If the paper does not move when you pull, or if you do not see the paper in this area, stop and go to step 3.

- 3 Pull the tray 1 half.

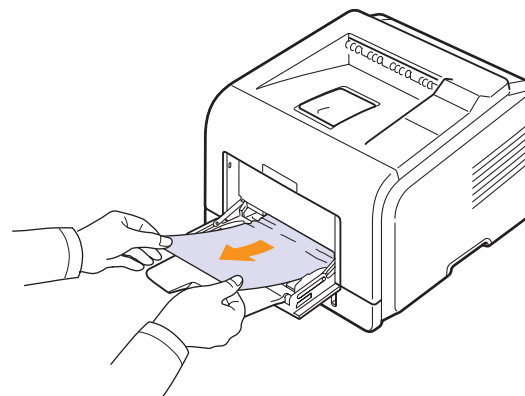
- 4 Pull the paper straight up and out.



- 5 Insert the trays back into the printer. Printing automatically resumes.

In the multi-purpose tray

- 1 If the paper is not feeding properly, pull the paper out of the printer.



- 2 Open and close the front cover to resume printing.

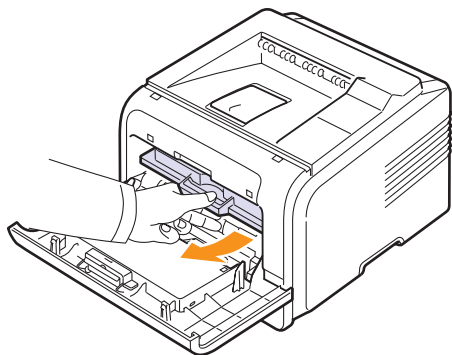
Around the toner cartridge



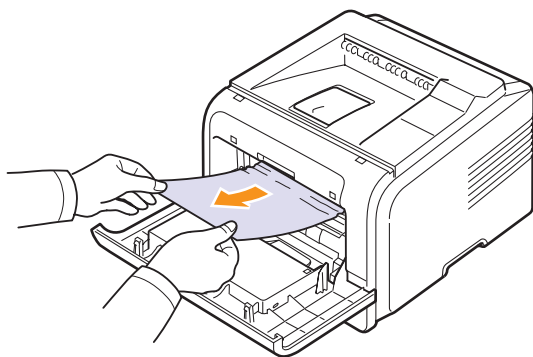
Note

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

- 1 Open the front cover and pull the toner cartridge out.



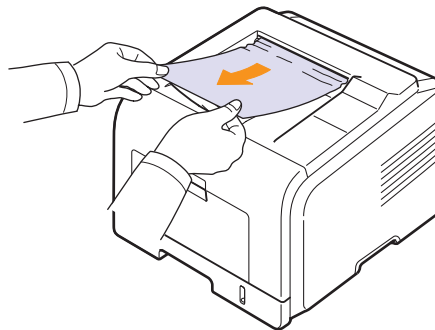
- 2 Remove the jammed paper by gently pulling it straight out.



- 3 Replace the toner cartridge and close the front cover. Printing automatically resumes.

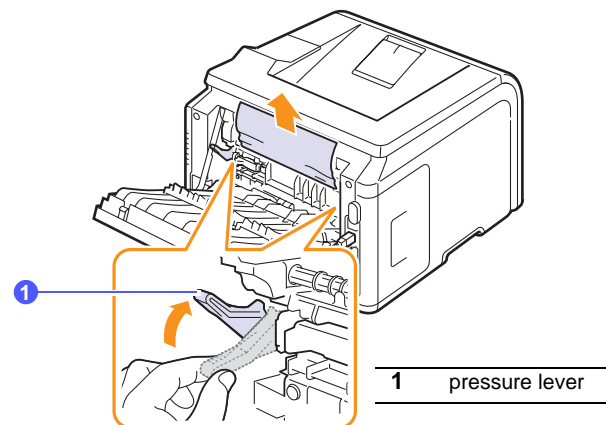
In the paper exit area

- 1 Open and close the front cover. The jammed paper is automatically ejected from the printer.
- 2 Gently pull the paper out of the output tray.



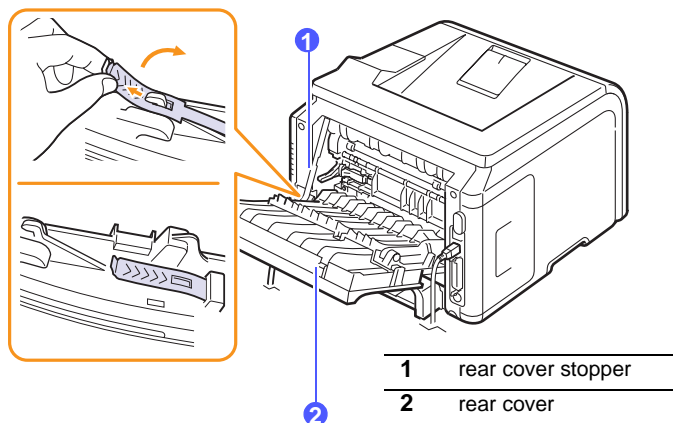
If you do not see the jammed paper or if there is any resistance when you pull, stop and go to the next step.

- 3 Open the rear cover.
- 4 If you see the jammed paper, push the pressure lever on each side up and remove the paper. Return the pressure lever to its original position and skip the step 10.

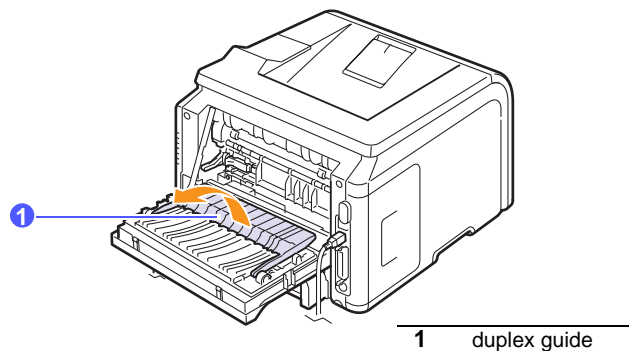


If you still do not see the paper, go to the next step.

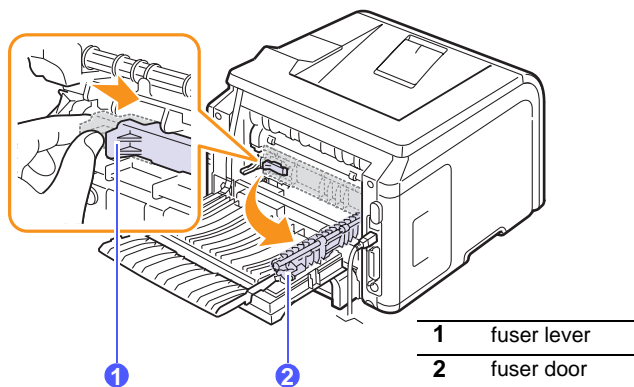
- 5 Release the blue strap, the rear cover stopper, and fully open the rear cover, as shown.



- 6 Unfold the duplex guide fully.

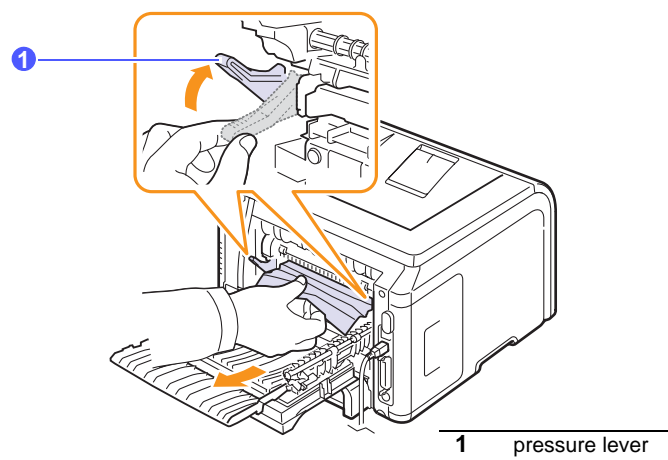


- 7 While pushing the fuser lever to the right, open the fuser door.



- 8 Pull the jammed paper out.

If the jammed paper does not move when you pull, push the pressure lever on each side up to loose the paper, and then remove it.



- 9 Return the lever, door, stopper, and guide to their original position.

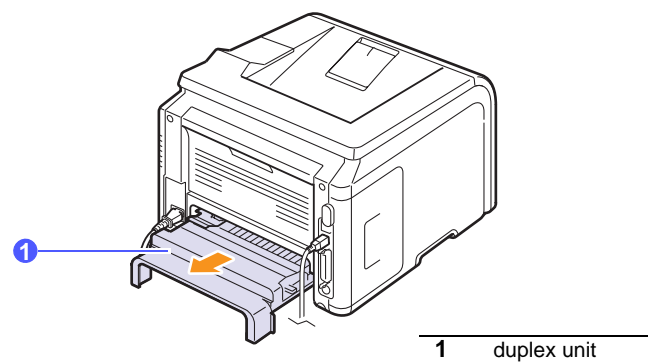
- 10 Close the rear cover. Printing automatically resumes.

In the duplex unit area (ML-3051ND only)

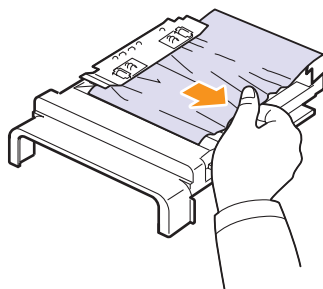
If the duplex unit is not inserted correctly, paper jam may occur. Make sure that the duplex unit is inserted correctly.

Duplex jam 0

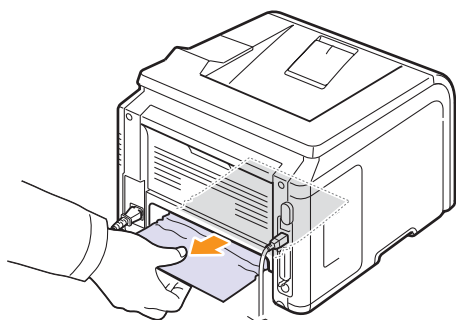
- 1 Pull the duplex unit out of the printer.



- 2 Remove the jammed paper from the duplex unit.

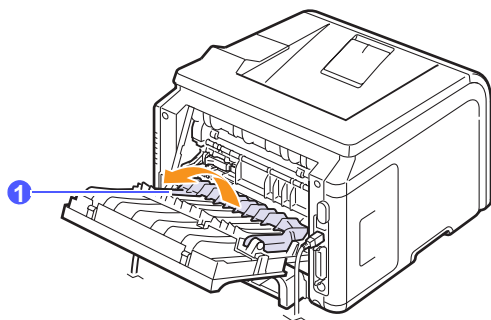


If the paper does not come out with the duplex unit, remove the paper from the bottom of the printer.



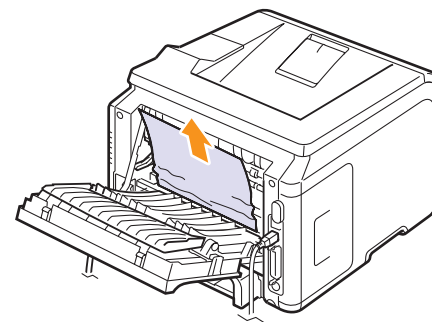
Duplex jam 1

- 1 Open the rear cover.
- 2 Unfold the duplex guide fully.



1 duplex guide

- 3 Pull the jammed paper out.

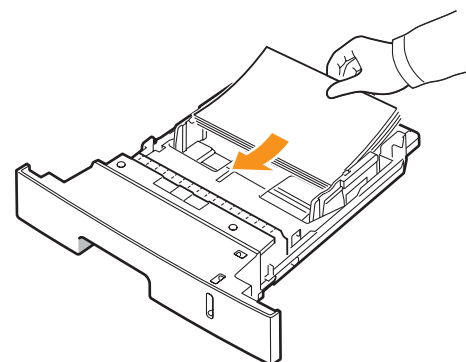


TiPs for avoiding paper jams

By selecting the correct media types, most paper jams can be avoided. When a paper jam occurs, follow the steps outlined on page 9.1.

- Follow the procedures on page 5.5. Ensure that the adjustable guides are positioned correctly.
- Do not overload the tray. Ensure that the paper level is below the paper capacity mark on the inside wall of the tray.
- Do not remove paper from the tray while your printer is printing.
- Flex, fan, and straighten paper before loading.
- Do not use creased, damp, or highly curled paper.
- Do not mix paper types in a tray.
- Use only recommended print media. See page 5.1.
- Ensure that the recommended print side of print media is facing down in the tray, or facing up in the multi-purpose tray.
- If paper jams occur frequently when you print on A5-sized paper:

Load the paper into the tray with the long edge facing the front of the tray.



In the printer properties window, set the page orientation to be rotated 90 degrees. See the **Software Section**.

Troubleshooting checklist

If the printer is not working properly, consult the following checklist. If the printer does not pass a step, follow the corresponding troubleshooting suggestions.

Condition	Suggested solutions
Make sure that the Status LED on the control panel lights green and Ready is shown on the display.	<ul style="list-style-type: none"> • If the Status LED is off, check the power cord connection. Check the power switch. Check the power source by plugging the power cord into another outlet. • If the Status LED lights red, check the display message. See page 9.7.
Print a demo page to verify that the printer is feeding paper correctly. See page 2.6.	<ul style="list-style-type: none"> • If a demo page does not print, check the paper supply in the tray. • If the paper jams in the printer, see page 9.1. • If an error message appears on the display, see page 9.7.
Check the demo page to see if it printed correctly.	If there is a print quality problem, see page 9.11.
Print a short document from a software application to verify that the computer and printer are connected and are communicating correctly.	<ul style="list-style-type: none"> • If the page does not print, check the cable connection between the printer and the computer. • Check the print queue or print spooler to see if the printer has been paused. • Check the software application to ensure that you are using the proper printer driver and communication port. If the page is interrupted during printing, see page 9.9.
If completing the checklist does not resolve the printer problem, check the following troubleshooting sections.	<ul style="list-style-type: none"> • "Understanding display messages" on page 9.7. • "Solving general printing problems" on page 9.9. • "Common Windows problems" on page 9.13. • "Common Macintosh problems" on page 9.16. • "Common PostScript problems" on page 9.14. • "Common Linux problems" on page 9.14.

Understanding the status LED

Status	Description	
Off	<ul style="list-style-type: none"> • The printer is off-line and cannot print. • The printer is in power save mode. When data is received, it switches to on-line automatically. 	
Green	On	The printer is on-line and can receive data from the computer.
	Blinking	<ul style="list-style-type: none"> • When the backlight blinks slowly, the printer is receiving data from the computer. • When the backlight blinks quickly, the printer is receiving and printing data.
Red	On	<ul style="list-style-type: none"> • The toner cartridge is totally exhausted. Remove the old toner cartridge and install a new one. See page 8.4. • A paper jam has occurred. To solve the problem, see page 9.1. • The front cover is open. Close the front cover. • There is no paper in the tray. Load paper in the tray. • The printer has stopped printing due to a major error. Check the display message. See page 9.7 for details on the meaning of the error message.
	Blinking	<ul style="list-style-type: none"> • A minor error is occurring and the printer is waiting for the error to be cleared. Check the display message. When the problem is cleared, the printer resumes printing. • The toner cartridge is low. Order a new toner cartridge. You can temporarily improve print quality by redistributing the toner. See page 8.3.

Understanding display messages

Messages appear on the Smart Panel program window or the control panel display to indicate the printer's status or errors. Refer to the tables below to understand the messages' meaning and correct the problem if necessary. Messages and their meanings are listed in alphabetical order.



Note

When you call for service, it is very convenient to tell the service representative the display message.

Message	Meaning	Suggested solutions
Dev Cartridge Not Installed	There is no toner cartridge installed in your printer.	Install the toner cartridge.
Door Open	The front cover or rear cover is not securely latched.	Close the cover until it locks into place.
Duplex Jam 0 Check Inside	Paper has jammed during duplex printing.	Clear the jam. See page 9.4.
Duplex Jam 1 Open/Close Door	Paper has jammed during duplex printing.	Clear the jam. See page 9.5.
Fuser Door Open	The fuser door is not securely latched.	Open the rear cover and close the fuser door until it locks into place. For the location of the fuser door, see page 9.4.
Install Toner	A toner cartridge is not installed.	Install a toner cartridge.
Invalid Toner	The toner cartridge you have installed is not for your printer.	Install a Samsung-genuine toner cartridge, designed for your printer.
Load [Size] In [Tray]	The paper size specified in the printer properties does not match the paper you are loading.	Load the correct paper in the tray.

Message	Meaning	Suggested solutions
Load Manual Press Cont Key	The multi-purpose tray is empty in manual feed mode.	Load a sheet of print material and press Stop (if you use the ML-3050) or OK (if you use the ML-3051N or ML-3051ND). You need to press Stop or OK each page to be printed.
Low Heat Error Cycle Power	There is a problem in the fuser unit.	Unplug the power cord and plug it back in. If the problem persists, please call for service.
LSU Hsync Error Cycle Power	A problem has occurred in the LSU (Laser Scanning Unit).	Unplug the power cord and plug it back in. If the problem persists, please call for service.
LSU Motor Error Cycle Power	A problem has occurred in the LSU (Laser Scanning Unit).	Unplug the power cord and plug it back in. If the problem persists, please call for service.
Main Motor Locked	There is a problem in the main motor.	Open and then close the front cover.
Memory Overflow	The printer does not have enough memory to print the current job.	The job will be automatically cleared and the printer will return to Standby mode. Expand the memory in your printer. See page 10.1.
Offline	The printer is off-line and cannot print.	Press any button.
Open Heat Error Cycle Power	There is a problem in the fuser unit.	Unplug the power cord and plug it back in. If the problem persists, please call for service.
Over Heat Error Cycle Power	There is a problem in the fuser unit.	Unplug the power cord and plug it back in. If the problem persists, please call for service.

Message	Meaning	Suggested solutions
Page Too Complex	Too complicated data was sent to the printer.	Simplify the page layout and remove unnecessary graphics from your document. If the message persists, expand the memory in your printer. See page 10.1.
Paper Jam 0 Open/Close Door	Paper has jammed in the feeding area of the tray.	Clear the jam. See page 9.1 and page 9.1.
Paper Jam 1 Open/Close Door	Paper has jammed in the fuser area.	Clear the jam. See page 9.3.
Paper Jam 2 Check Inside	Paper has jammed in the paper exit area.	Clear the jam. See page 9.3.
Power Failure	Power has turned off then on and the printer's memory has not been back up.	The job which you were trying to do before the power failure must be completely re-done.
Press Cont Key	The paper size specified in the printer properties does not match the paper you are loading.	Load the correct paper and press Stop (ML-3050) or OK (ML-3051N, ML-3051ND)
Printing xxx	The printer is printing jobs using the displayed language.	Complete your printing.
Ready	The printer is on-line and ready to printer.	Use your printer.
Ready Close Tray 1	The tray 1 is open but there is paper in the multi-purpose tray.	Close the tray 1 to clear the message.
Ready Close Tray 2	The optional tray 2 is open but there is paper in the multi-purpose tray.	Close the optional tray 2 to clear the message.
Ready IP Conflict	An IP address conflicts with other cards on the network.	Contact your network administrator and choose an address within your subnet which will not conflict with any other cards.

Message	Meaning	Suggested solutions
Ready Replace Cart	The life of some parts on the toner cartridge ends.	Regardless of the remaining toner, this is warning message showing that the toner cartridge replacement is needed as the parts life is exhausted. The toner cartridge is at the end of its life and the print quality lowers, you need to replace the cartridge to new one.
Replace Toner	This message appears between the Toner Empty and Toner Low status.	Replace the toner cartridge with a new one. See page 8.4.
Reset Now	The network card is initializing.	Wait until the message is cleared.
Restore	The printer settings or network settings are turning to their default value.	Wait until restoring is complete.
Self Diagnostic...	The engine in your printer is checking some problems detected.	Please wait a few minutes.
Serial Error	There is a problem in your printer.	Unplug the power cord and plug it back in. If the problem persists, please call for service.
Sleeping	The printer is on power save mode.	When data is received, it switches to on-line automatically.
Toner Empty	The toner cartridge has run out. The printer stops printing.	Replace the toner cartridge with a new one. See page 13.5.
Toner Low	The toner cartridge is almost empty.	Take out the toner cartridge and thoroughly shake it. By doing this, you can temporarily reestablish printing operations.

Message	Meaning	Suggested solutions
Tray 1 Open	The tray 1 is open and also there is no paper in the multi-purpose tray.	Close the tray 1 or load paper in the multi-purpose tray.
Tray 1 Paper Empty	There is no paper in the tray 1.	Load paper in the tray 1. See page 5.5.
Tray 2 Open	The optional tray 2 is open and also there is no paper in the multi-purpose tray.	Close the optional tray 2 or load paper in the multi-purpose tray.
Tray 2 Paper Empty	There is no paper in the optional tray 2.	Load paper in the optional tray 2. See page 5.5.

Solving general printing problems

For problems with the operation of your printer, refer to the table for suggested solutions.

Condition	Possible cause	Suggested solutions
The printer does not print.	The printer is not receiving power.	Check the power cord connections. Check the power switch and the power source.
	The printer is not selected as the default printer.	Select Samsung ML-305x Series PCL 6 or Samsung ML-305x Series PS as your default printer.
	The printer cover is not closed.	Close the printer cover.
	Paper is jammed.	Clear the paper jam. See page 9.1.
	No paper is loaded.	Load paper. See page 5.4.
	The toner cartridge is not installed.	Install the toner cartridge.
	The printer may be in manual feed mode and out of paper.	Check the display message, add paper to the multi-purpose tray, and press Stop (ML-3050) or OK (ML-3051N or ML-3051ND) on the printer's control panel.
	The connection cable between the computer and the printer is not connected properly.	Disconnect the printer cable and reconnect it.
The connection cable between the computer and the printer is defective.	If possible, attach the cable to another computer that is working properly and try to print a document. You can also try using a different printer cable.	
The port setting is incorrect.	Check the Windows printer setting to make sure that the print job is sent to the correct port. If the computer has more than one port, make sure that the printer is attached to the correct one.	

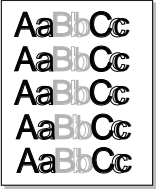
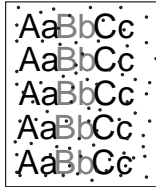
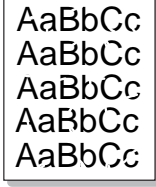
Condition	Possible cause	Suggested solutions
The printer does not print. (Continued)	The printer may be configured incorrectly.	Check the printer properties to ensure that all of the print settings are correct.
	The printer driver may be incorrectly installed.	Reinstall the printer driver; See the Software Section . Try printing a test page.
	The printer is malfunctioning.	Check the display message on the control panel to determine if the printer is indicating a system error.
Printer selects print materials from the wrong paper source.	The paper source selection in the printer properties may be incorrect.	For many software applications, the paper source selection is found under the Paper tab within the printer properties. Select the correct paper source. See the Software Section .
Paper does not feed into the printer.	Paper has not been loaded correctly.	Remove paper from the tray and reload it correctly. Check that the paper size guides are set correctly.
	There is too much paper in the tray.	Remove excess paper from the tray.
	The paper is too thick.	Use only paper that meets printer specifications.
Print job is extremely slow.	The job may be very complex.	Reduce the complexity of the page(s) or try adjusting the print quality settings. To adjust the print quality settings, reduce the resolution. If you have set the resolution to 1200 dpi (Best) , change it to 600 dpi (Normal) . See the Software Section . Change the port setting to the USB or network port to improve print speed. Your printer prints A4-sized paper at 28 ppm and letter-sized paper at 30 ppm. If you use the ML-3051ND, your printer prints A4-sized paper at 19 ipm and letter-sized paper at 21 ipm in the duplex printing mode.

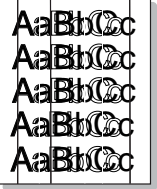
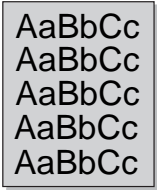
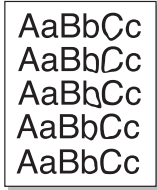
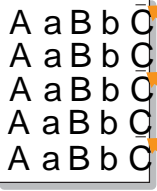
Condition	Possible cause	Suggested solutions
Print job is extremely slow. (Continued)	If using Windows 9x/Me, the Spooling Setting may be set incorrectly.	From the Start menu, choose Settings and Printers. Right-click the Samsung ML-305x Series PCL 6 printer icon, choose Properties , click the Details tab, and then choose the Spool Settings button. Select the desired spool setting.
	The computer may have insufficient random-access memory (RAM).	Install more memory in your printer. See page 10.1.
Half the page is blank.	The page layout is too complex.	Simplify the page layout and remove any unnecessary graphics from the document. Install more memory in your printer. See page 10.1.
	The page orientation setting may be incorrect.	Change the page orientation in your application. See the Software Section .
	The paper size and the paper size settings do not match.	Ensure that the paper size in the printer driver settings matches the paper in the tray. Or, ensure that the paper size in the printer driver settings matches the paper selection in the software application settings you use.
The paper keeps jamming.	There is too much paper in the tray.	Remove excess paper from the tray. If printing on special materials, use the multi-purpose tray.
	An incorrect type of paper is being used.	Use only paper that meets printer specifications. If printing on special materials, use the multi-purpose tray.
	An incorrect output method is being used.	Special print materials, such as thick paper, should not be printed using the output tray (face-down). Use the rear cover (face-up) instead.
	There may be debris inside the printer.	Open the front cover and remove the debris.

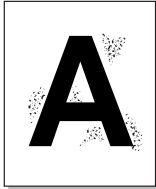
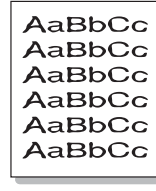

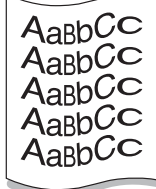
Condition	Possible cause	Suggested solutions
The printer prints, but the text is wrong, garbled, or incomplete.	The printer cable is loose or defective.	Disconnect and reconnect the printer cable. Try a print job that you have already printed successfully. If possible, attach the cable and printer to another computer and try a print job that you know works. Finally, try a new printer cable.
	The wrong printer driver was selected.	Check the application's printer selection menu to ensure that your printer is selected.
	The software application is malfunctioning.	Try printing a job from another application.
	The operating system is malfunctioning.	If printing from Windows (any version), exit to a DOS prompt and verify functionality with the following command: At a C:\ prompt, type Dir LPT1 , and press OK . (This assumes you are connected to LPT1.) Exit Windows and reboot the computer. Turn the printer off and then back on again.
Pages print, but are blank.	The toner cartridge is defective or out of toner.	Redistribute the toner cartridge. See page 8.3. If necessary, replace the toner cartridge. See page 8.4.
	The file may have blank pages.	Check the file to ensure that it does not contain blank pages.
	Some parts, such as the controller or the board, may be defective.	Contact a service representative.
The illustrations print incorrectly in Adobe Illustrator.	The setting in the software application is wrong.	Select Download as Bit Image in the Advanced Options window of the graphic properties. Print the document again.

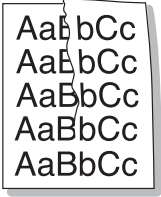
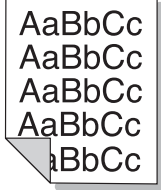
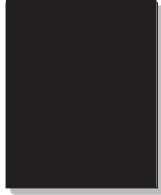
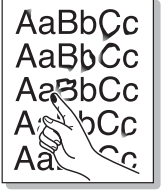

Solving print quality problems

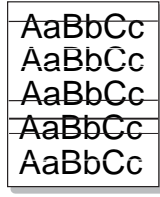
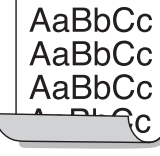
Dirt inside of the printer or improper paper loading may reduce print quality. See the table below to troubleshoot problems.

Condition	Suggested solutions
<p>Light or faded print</p> 	<p>If a vertical white streak or faded area appears on the page:</p> <ul style="list-style-type: none"> The toner supply is low. You may be able to temporarily extend the toner cartridge life. See page 8.3. If this does not improve print quality, install a new toner cartridge. The paper may not meet paper specifications (for example, the paper is too moist or too rough). See page 5.3. If the entire page is light, the print resolution setting is too light or toner save mode is on. Adjust the print resolution and toner save mode in the printer properties. See the Software Section. A combination of faded or smeared defects may indicate that the printer needs cleaning. See page 8.1. The surface of LSU may be dirty. Clean the LSU. See page 8.1.
<p>Toner spots</p> 	<ul style="list-style-type: none"> The paper may not meet specifications (for example, the paper is too moist or too rough). See page 5.3. The transfer roller or paper path may be dirty. See page 8.1.
<p>Dropouts</p> 	<p>If generally rounded, faded areas occur randomly on the page:</p> <ul style="list-style-type: none"> A single sheet of paper may be defective. Try reprinting the job. The moisture content of the paper is uneven or the paper has moist spots on its surface. Try a different brand of paper. See page 5.3. The paper lot is bad. The manufacturing processes can cause some areas to reject toner. Try a different kind or brand of paper. The toner cartridge may be defective. See "Vertical repetitive defects" on the next page. If these steps do not correct the problems, contact a service representative.

Condition	Suggested solutions
Vertical lines 	<p>If black vertical streaks appear on the page:</p> <ul style="list-style-type: none"> The drum inside the toner cartridge has probably been scratched. Install a new toner cartridge.
Gray background 	<p>If the amount of background shading becomes unacceptable, the procedures below may fix the problem.</p> <ul style="list-style-type: none"> Change to lighter weight pages. See page 5.3. Check the printer's environment; very dry (low humidity) or high humidity (higher than 80% RH) conditions can increase the amount of background shading. Remove the old toner cartridge and install a new one. See page 8.4.
Toner smear 	<ul style="list-style-type: none"> Clean the inside of the printer. See page 8.1. Check the type and quality. See page 5.2. Remove the toner cartridge and install a new one. See page 8.4.
Vertical repetitive defects 	<p>If marks repeatedly appear on the printed side of the page at even intervals:</p> <ul style="list-style-type: none"> The toner cartridge may be damaged. If a repetitive mark occurs on the page, print a cleaning sheet several times to clean the cartridge; see page 8.2. After the printout, if you still have the same problems, install a new toner cartridge. See page 8.4. Parts of the printer may have toner on them. If the defects occur on the back of the page, the problem will likely correct itself after a few more pages. The fusing assembly may be damaged. Contact a service representative.

Condition	Suggested solutions
Background scatter 	<p>Background scatter results from bits of toner distributed on the printed page.</p> <ul style="list-style-type: none"> The paper may be too damp. Try printing with a different batch of paper. Do not open packages of paper until necessary so that the paper does not absorb too much moisture. If background scatter occurs on an envelope, change the printing layout to avoid printing over areas that have overlapping seams on the reverse side. Printing on seams can cause problems. If background scatter covers the entire surface area of a printed page, adjust the print resolution through your software application or via the printer properties window.
Misformed characters 	<ul style="list-style-type: none"> If characters are improperly formed and producing hollowed images, the paper stock may be too slick. Try a different paper. See page 5.3. If characters are improperly formed and producing a wavy effect, the scanner unit may need service. Verify that it also occurs on a demo page (see page 2.6). For service, contact a service representative.
Page skew 	<ul style="list-style-type: none"> Ensure that the paper is loaded properly. Check the paper type and quality. See page 5.2. Ensure that the paper or other material is loaded correctly and the guides are not too tight or too loose against the paper stack.
Curl or wave 	<ul style="list-style-type: none"> Ensure that the paper is loaded properly. Check the type and quality. Both high temperature and humidity can cause paper curl. See page 5.2. Turn over the stack of paper in the tray. Also try rotating the paper 180° in the tray. Try printing to the rear cover (face-up).

Condition	Suggested solutions
Wrinkles or creases 	<ul style="list-style-type: none"> • Ensure that the paper is loaded properly. • Check the paper type and quality. See page 5.2. • Open the rear cover and try printing to the rear cover (face-up). • Turn over the stack of paper in the tray. Also try rotating the paper 180° in the tray.
Back of printouts are dirty 	<ul style="list-style-type: none"> • The transfer roller may be dirty. See page 8.1. • Check for leaking toner. Clean the inside of the printer.
Solid color or Black pages 	<ul style="list-style-type: none"> • The toner cartridge may not be installed properly. Remove the cartridge and reinsert. • The toner cartridge may be defective and need replacing. Install a new toner cartridge. • The printer may require repair. Contact a service representative.
Loose toner 	<ul style="list-style-type: none"> • Clean the inside of the printer. • Check the paper type and quality. See page 5.2. • Install a new toner cartridge. See page 8.4. • If the problem persists, the printer may require repair. Contact a service representative.
Character Voids 	<p>Character voids are white areas within characters that should be solid black:</p> <ul style="list-style-type: none"> • If you are using transparencies, try another type of transparency. Because of the composition of the transparency, some character voids may be normal. • You may be printing on the wrong surface on the paper. Remove the paper and turn it around. • The paper may not meet paper specifications. See page 5.3.

Condition	Suggested solutions
Horizontal stripes 	<p>If horizontally aligned black streaks or smears appear:</p> <ul style="list-style-type: none"> • The toner cartridge may be installed improperly. Remove the cartridge and reinsert. • The toner cartridge may be defective. Install a new toner cartridge. See page 8.4. • If the problem persists, the printer may require repair. Contact a service representative.
Curl 	<p>If the printed paper is curled or paper does not feed into the printer:</p> <ul style="list-style-type: none"> • Turn over the stack of paper in the tray. Also try rotating the paper 180° in the tray. • Try printing to rear cover.

Common Windows problems

Condition	Suggested solutions
“File in Use” message appears during installation.	Exit all software applications. Remove all software from the StartUp Group, then restart Windows. Reinstall the printer driver.
“Error Writing to LPTx” message appears.	<ul style="list-style-type: none"> • Ensure that the cables are connected correctly, the printer is on. • If bi-directional communication is not turned on in the driver, it will also cause this message.
“General Protection Fault”, “Exception OE”, “Spool32”, or “Illegal Operation” messages appear.	Close all other applications, reboot Windows and try printing again.
“Fail To Print,” “A printer timeout error occurred,” messages appear.	These messages may appear during printing. Just keep waiting until the printer finishes printing. If the message appears in standby mode or after printing has been completed, check the connection and/or whether an error has occurred.



Note

Refer to Microsoft Windows 9x/Me/NT 4.0/2000/XP/2003 User's Guide that came with your PC for further information on Windows error messages.

Common PostScript problems

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



Note

To receive a printed or screen displayed message when PostScript errors occur, open the Print Options window and click the desired selection next to the PostScript errors section.

Condition	Possible cause	Suggested solutions
PostScript file can not be printed.	The PostScript driver may not be installed correctly.	<ul style="list-style-type: none"> Print a configuration page and verify that the PostScript version is available for printing. Install the PostScript driver; to installing the PS printer driver, you need to select Custom and put a check mark on the PS printer driver. See the Software Section. If problem persists, contact a service representative.
"Limit Check Error" message appears.	The print job was too complex.	You might need to reduce the complexity of the page or install more memory.
A PostScript error page prints.	Print job may not be PostScript.	Make sure that the print job is a PostScript job. Check to see whether the software application expected a setup or PostScript header file to be sent to the printer.
The optional tray 2 is not selected in the driver.	The printer driver has not been configured to recognize the optional tray 2.	Open the PostScript driver properties, select the Device Settings tab, and set the Tray2 option of the Installable Options section to Installed .
When print a document in Macintosh with Acrobat Reader 6.0 or higher, colors print incorrectly.	The resolution setting in the printer driver may not be matched with that in Acrobat Reader.	Make sure that the resolution setting in your printer driver matches that in Acrobat Reader.

Common Linux problems

Condition	Suggested solutions
I can't change settings in the configuration tool.	You need to have administrator privileges to be able to affect global settings.
I am using the KDE desktop but the configuration tool and LLPR won't start.	Maybe you do not have the GTK libraries installed. These usually come with most Linux distributions, but you may have to install them manually. Refer to your distribution's installation manual for more details about installing additional packages.
I just installed this package but can't find entries in the KDE/Gnome menus.	Some versions of the KDE or GNOME desktop environments may require that you restart your session for the changes to take effect.
I get a "Some options are not selected" error message while editing the printer settings.	Some printers have conflicting settings, meaning that some settings for two options can't be selected at the same time. When you change a setting and the Printer Package detects such a conflict, the conflicting option is changed to a "No Choice" value, and you have to choose an option that does not conflict before being able to submit the changes.
I can't make a printer the system default.	<p>In some conditions, it may not be possible to change the default queue. This happens with some variants of LPRng, especially on recent RedHat systems that use the "printconf" database of queues.</p> <p>When using printconf, the /etc/printcap file is automatically refreshed from the database of printers managed by the system (usually through the "printtool" command), and the queues in /etc/printcap.local are appended to the resulting file. Since the default queue in LPRng is defined as the first queue in /etc/printcap, therefore it is not possible for the Linux Printer Package to change the default when some queues have otherwise been defined using printtool.</p> <p>LPD systems identify the default queue as the one named "lp". Thus, if there is already a queue by this name, and if it doesn't have an alias, then you won't be able to change the default. To work around this, you can either delete the queue or rename it by manually editing the /etc/printcap file.</p>

Condition	Suggested solutions
The N-up setting does not work correctly for some of my documents.	The N-up feature is achieved through post-processing of the PostScript data that is being sent to the printing system. However, such post-processing can only be adequately achieved if the PostScript data conforms to the Adobe Document Structuring Conventions. Problems may arise when using N-up and other features relying on post-processing if the document being printed isn't compliant.
I am using BSD lpr (Slackware, Debian, older distributions) and some options chosen in LLPR don't seem to take effect.	Legacy BSD lpr systems have a hard limitation on the length of the option string that can be passed to the printing system. As such, if you selected a number of different options, the length of the options may have exceeded and some of your choices won't be passed to the programmes responsible for implementing them. Try to select fewer options that deviate from the defaults, to save on memory usage.
I am trying to print a document in Landscape mode, but it prints rotated and cropped.	Most Unix applications that offer a Landscape orientation option in their printing options will generate correct PostScript code that should be printed as is. In that case, you need to make sure that you leave the LLPR option set to its default Portrait setting, to avoid unwanted rotations of the page that would result in cropped output.
Some pages come out all white (nothing is printed), and I am using CUPS.	If the data being sent is in Encapsulated PostScript (EPS) format, some earlier versions of CUPS (1.1.10 and before) have a bug preventing them from being processed correctly. When going through LLPR to print, the Printer Package will work around this issue by converting the data to regular PostScript. However, if your application bypasses LLPR and feeds EPS data to CUPS, the document may not print correctly.
I can't print to an SMB (Windows) printer.	To be able to configure and use SMB-shared printers (such as printers shared on a Windows printer), you need to have a correct installation of the SAMBA package that enables that feature. The "smbclient" command should be available and usable on your system.

Condition	Suggested solutions
My application seems to be frozen while LLPR is running.	Most Unix applications will expect a command like the regular "lpr" command to be non-interactive and thus return immediately. Since LLPR is waiting for user input before passing the job on to the print spooler, very often the application will wait for the process to return, and thus will appear to be frozen (its windows won't refresh). This is normal and the application should resume functioning correctly after the user exits LLPR.
How do I specify the IP address of my SMB server?	It can be specified in the "Add Printer" dialogue of the configuration tool, if you don't use the CUPS printing system. Unfortunately, CUPS currently doesn't allow to specify the IP address of SMB printers, so you will have to be able to browse the resource with SAMBA in order to be able to print.
Some documents come out as white pages when printing.	Some versions of CUPS, especially those shipped with Mandrake Linux before the 8.1 release, have some known bugs when processing PostScript output from some applications. Try upgrading to the latest version of CUPS (at least 1.1.14). Some RPM packages for most popular distributions are provided as a convenience with this Linux Printing Package.
I have CUPS and some options (such as N-up) seem to be always enabled even though I don't pick them in LLPR.	There may be some local options defined in your ~/.lpoptions file, which is manipulated by the lpoptions command. These options will always be used if not overridden by LLPR settings. To get rid of all options for a printer, run the following command, replacing "printer" with the name of the queue: lpoptions -x printer
I configured a printer to print to a file, but I get "Permission denied" errors.	Most printing systems will not run as the super-user but as a special user (usually "lp"). Therefore, make sure that the file you have chosen to print to is accessible to the user owning the spooler daemon.
On my PCL (or SPL) printer, I sometimes get error messages printing instead of my document.	Unfortunately, some Unix applications may generate non-compliant PostScript output that may not be supported by Ghostscript, or even the printer itself in PostScript mode. You can try to capture the output to a file and view the results with Ghostscript (gv or ghostview will allow you to do so interactively) and see if you get error messages. However, since the application is fault at probably, contact your software vendor to inform them of the issue.

Condition	Suggested solutions
Some color images come out all black.	<p>This a known bug in Ghostscript (until GNU Ghostscript version 7.05) when the base color space of the document is indexed color space and it is converted through CIE color space.</p> <p>Because Postscript uses CIE color space for Color Matching System, you should upgrade Ghostscript on your system to at least GNU Ghostscript version 7.06 or later. You can find recent Ghostscript versions at www.ghostscript.com.</p>

Common Macintosh problems

Condition	Suggested solutions
The printer does not print a document from Acrobat Reader.	You should change the Print Method option to Print as Image when you print from Acrobat Reader.
The document has printed, but the print job has not disappeared from the spooler in Mac OS 10.3.2.	Update your Mac OS to OS 10.3.3 or higher.

10 Installing accessories

Your printer is a full-featured laser printer that has been optimized to meet most of your printing needs. Recognizing that each user may have different requirements, however, Samsung makes several accessories available to enhance the printer's capabilities.

This chapter includes:

- **Precautions when installing accessories**
- **Installing a memory DIMM**
- **Installing a wireless network interface card**

Precautions when installing accessories

Disconnect the power cord:

Never remove the control board cover while the power is being supplied.

To avoid the possibility of an electrical shock, always disconnect the power cord when installing or removing ANY internal or external accessories.

Discharge static electricity:

The control board and internal accessories (network interface card and memory DIMM) are sensitive to static electricity. Before installing or removing an internal accessories, discharge static electricity from your body by touching something metal, such as the metal back plate on any device plugged into a grounded power source. If you walk round before finishing installation, discharge any static electricity once again.

Installing a memory DIMM

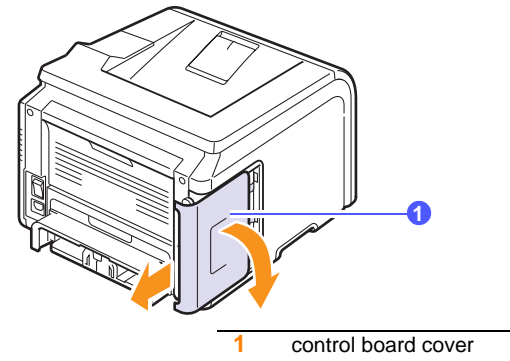
Your printer has a dual in-line memory module (DIMM) slot. Use this DIMM slot to install additional memory.

The ML-3050 has 32 MB of memory which can be expanded to 288 MB. The ML-3051N and ML-3051ND have 64 MB of memory which can be expanded to 320 MB.

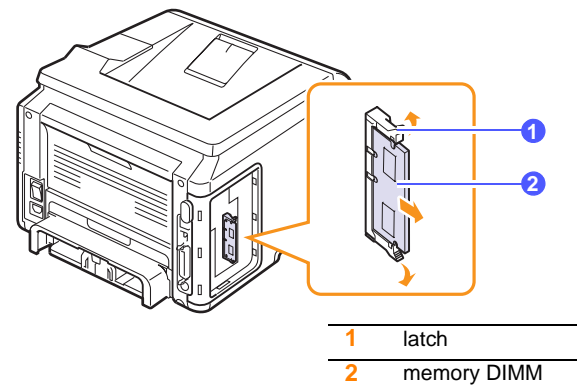
For order information for optional memory DIMMs, see page 7.1.

- 1 Turn the printer power off and unplug all cables from the printer.

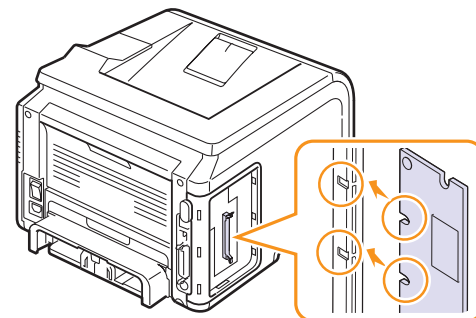
- 2 Grasp the control board cover and slide toward you to open it.



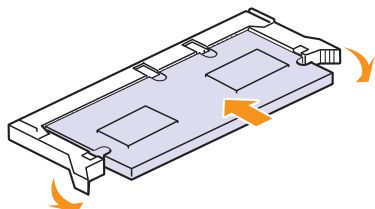
- 3 Completely open the latch on each side of the DIMM slot. Remove the preinstalled memory DIMM.



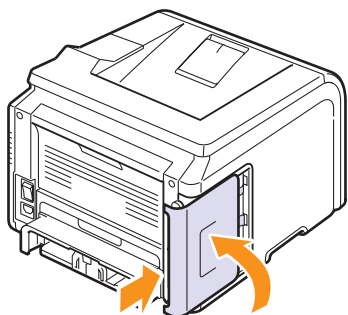
- 4 Take out a new memory DIMM from the plastic bag.
- 5 Holding the memory DIMM by the edges, align the notches on the memory DIMM with the grooves on the memory DIMM slot.



- 6 Push the DIMM straight into the DIMM slot until it snaps into place. Make sure the latches fit over the notches located on either side of the DIMM.



- 7 Replace the control board cover.



- 8 Reconnect the power cord and printer cable, and turn the printer on.

Setting the memory in the PostScript printer properties

After installing the memory DIMM, you need to select it in the printer properties of the PostScript printer driver so that you can use it.

- 1 Make sure that the PostScript printer driver is installed in your computer. To installing the PostScript printer driver, you need to select **Custom** and put a check mark on the PostScript printer driver. See the **Software Section**.
- 2 Click the Windows **Start** menu.
- 3 For Windows 95/98/Me/NT4.0/2000, select **Settings** and then **Printers**.
For Windows XP/2003, select **Printers and Faxes**.
- 4 Select the **Samsung ML-305x Series PostScript** printer.
- 5 Click the right mouse button on the printer icon and select **Properties**.
- 6 For Windows 95/98/Me, select **Device Option** tab.
For Windows NT4.0/2000/XP/2003, select **Device Settings** tab.

- 7 Select the amount of memory you installed from **Printer Memory** in the **Installable Option** section.

For Windows 98, select **Installable Option** → **VMOption** → **change setting for:VMOption** → **change memory**.

- 8 Click **OK**.

Installing a wireless network interface card

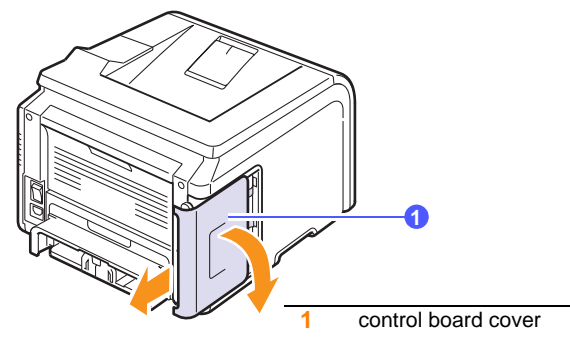
The ML-3051N and ML-3051ND is equipped with a network interface which allows you to use your printer on a network. You can also purchase a wireless network interface card to enable the use of the printer in wireless network environments

To use the ML-3050 in network environments, you need to buy an optional wired or wireless network printer server. For information about installing the network printer server, see the network printer server user's guide.

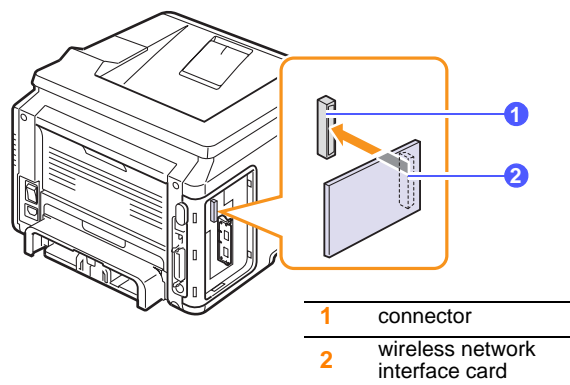
For order information, see page 7.1.

Review the precautions on page 10.1 and then follow this procedure to install the wireless network interface card in your printer.

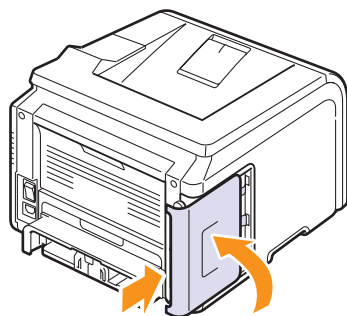
- 1 Turn the printer power off and unplug all cables from the printer.
- 2 Grasp the control board cover and slide toward you to open it.



- 3 Align the connector on the wireless network interface card with the connector on the control board. Push the card firmly into the connector on the control board until it is completely and securely in place.



- 4 Replace the control board cover.



- 5 Reconnect the power cord and turn the printer on.



Note

For information about configuring and using the printer on a wireless network environment, refer to the Network Printer User's Guide provided with the wireless network interface card. You can also configure the network parameters on the control panel; see the next column.

Configuring the wireless network parameters

After installing the wireless network card, you must configure the appropriate network parameters to use your printer in a wireless network. To do this, you can use both control panel and SyncThru Web Service, an embedded web site of your printer. This section gives you basic information on 802.11b/g network parameters which can be configured from the control panel. See the supplied Network Printer User's Guide.

Configuring basic network settings

You can configure basic wireless settings, such as SSID, Operation Mode, and channels. You can retrieve basic settings by selecting a wireless network or manually configure them as you need.

- 1 Press **Menu** until **Network** appears on the bottom line of the display and press **OK**.
- 2 Press the **Scroll** buttons until **Wireless** appears and press **OK**.
- 3 Press **OK** when **SSID Type** appears.
- 4 Press the **Scroll** buttons to select the setup method you want and press **OK**.
 - **Search List:** The wireless network interface card on your printer searches for wireless networks in the area and shows the results.
 - **Custom:** You can configure the wireless settings according to your needs.
- 5 If you selected **Search List**, press the **Scroll** buttons to select a network and press **OK**.

If you selected **Custom**, set each network options:

 - **Edit SSID:** Enter the SSID, the name that identifies a wireless network. SSID is case-sensitive so you need to enter it.
 - **Operation Mode:** Select the type of wireless connections.

In **Ad-Hoc** mode, wireless cards communicate directly each other.
In **Infrastructure** mode, network cards communicate with each other through an access point, which allows both wireless and cabled cards to send files to the printer. If you select **Auto**, the printer selects the operation mode automatically, according to the network cable's connection each time it boots up.
- 6 When you have finished, press **Stop** to return to Standby mode.



Note

In **Ad-Hoc** mode, even if the network cable is connected, your printer will use the wireless interface.

- **Channel:** This option is available only in the Ad-Hoc mode. In most cases, you will not need to change this setting. The printer will scan all available channels for the specified network and will adapt its channel to the one detected.

Selecting the authentication type

Authentication is a process of identifying the legitimacy of an user to access a network. You can select whether or not authentication is used.

- 1 Press **Menu** until **Network** appears on the bottom line of the display and press **OK**.
- 2 Press the **Scroll** buttons until **Wireless** appears and press **OK**.
- 3 Press the **Scroll** buttons until **Authentication** appears and press **OK**.
- 4 Press the **Scroll** buttons to select the type you want.
 - **Open System**: Authentication is not used.
 - **Shared Key**: Authentication is used.
- 5 Press **OK** to save your selection.
- 6 Press **Stop** to return to Standby mode.

Setting Encryption

If your network uses WEP encryption keys, you can must select the appropriate encryption type and configure encryption keys. You can configure up to four keys. The active key must match the key value and key position (for example, Key 1) configured on other wireless devices in the network.

- 1 Press **Menu** until **Network** appears on the bottom line of the display and press **OK**.
- 2 Press the **Scroll** buttons until **Wireless** appears and press **OK**.
- 3 Press the **Scroll** buttons until **Encryption** appears and press **OK**.



Note

If you have set the authentication type to **Open System**, the **Encryption** menu does not display.

- 4 Set each encryption option and press **OK**.
 - **Encrypt. Type**: Select an encryption type: **None**, **64-bit WEP**, or **128-bit WEP**.
 - **Key Type**: Select the key type of your network.
 - **Using Key**: Select the key to be used in your network.
 - **Edit Key**: Enter the key number for the selected key position. The numbers you can enter as follows:

	Hexadecimal	Alphanumeric
64-bit WEP	10 digits	5 characters
128-bit WEP	26 digits	13 characters

- 5 When you have finished, press **Stop** to return to Standby mode.

11 Specifications

This chapter includes:

- **Printer specifications**

Printer specifications

Item	Specifications and Description	
Model name	ML-3050, ML-3051N, ML-3051ND (DV30MPB)	
Printing speed ^a	28 ppm (A4); 30 ppm (Letter) Duplex: 19 ipm (A4); 21 ipm (Letter)	
Resolution	Up to 1200 x 1200 dpi effective output	
Warm-up time	Less than 30 seconds	
First print out time	Standby mode: 8.5 seconds Sleep mode: 31.5 seconds	
Power rating	AC 110 ~ 127 V (USA, Canada) / 220 - 240 V (Others), 50 / 60 Hz	
Power consumption	Average: 550 W Power save mode: Less than 11 W	
Noise level ^b	Standby mode: Less than 39 dBA Printing mode: Less than 54 dBA	
Toner cartridge life ^c	<ul style="list-style-type: none"> • Starter toner cartridge: 4,000 pages • Standard: 4,000 pages • High yield: 8,000 pages (at ISO 19752 5% coverage toner cartridge) 	
Duty cycle	Monthly: Up to 100,000 pages	
Weight	ML-3050, ML-3051N	Gross: 15.5 Kg / Net: 12.2 Kg
	ML-3051ND	Gross: 16 Kg / Net: 12.7 Kg
Package weight	Paper: 2.5 Kg, Plastic: 0.6 Kg	
External dimensions (W x D x H)	400 x 435 x 284 mm (15.7 x 17.1 x 11.2 inches)	
Operating environment	Temperature: 10 ~ 32° C (50 ~ 90° F) Humidity: 20 ~ 80% RH	
Printer language	PCL 6 ^d , PostScript 3, IBM ProPrinter, EPSON, SPL	

Item	Specifications and Description	
Memory	ML-3050	32 MB (288 MB)
	ML-3051N, ML-3051ND	64 MB (320 MB)
	16, 32, 64, 128, or 256 MB optional memory available. Use only the Samsung-approved DIMM.	
Fonts	ML-3050	1 bitmap, 45 scalable
	ML-3051N, ML-3051ND	1 bitmap, 45 scalable, 136 PostScript3 fonts
Interface	<ul style="list-style-type: none"> • IEEE 1284 Bidirectional Parallel Standard <ul style="list-style-type: none"> - Modes supported: Compatible, Nibble, Byte, ECP • USB Interface Standard <ul style="list-style-type: none"> - USB 2.0 compliant - 480 Mbps 1 port • Network Interface <ul style="list-style-type: none"> ML-3050: 802.11b ML-3051N, ML-3051ND: 802.11b/g 	
OS compatibility ^e	<ul style="list-style-type: none"> • Windows 95/98/Me/NT 4.0/2000/XP/2003. • Various Linux OS. • Mac 10.3 (ML-3050) or 8.6 ~ 9.2/10.1 ~ 10.4 (ML-3051N, ML-3051ND) 	
Options	ML-3050	250-sheet tray, Ethernet 10/100 Base TX, Ethernet 100 Base TX + 802.11b wireless LAN
	ML-3051N, ML-3051ND	250-sheet tray, 802.11b/g wireless LAN

- a. Print speed will be affected by operating system used, computing performance, application software, connection method, media type, media size, and job complexity.
- b. Sound pressure Level, ISO7779
- c. The number of pages may be affected by operating environment, printing interval, media type, and media size.
- d. Compatible with PCL6 Version 2.1
- e. Please visit www.samsungprinter.com to download the latest software version.

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