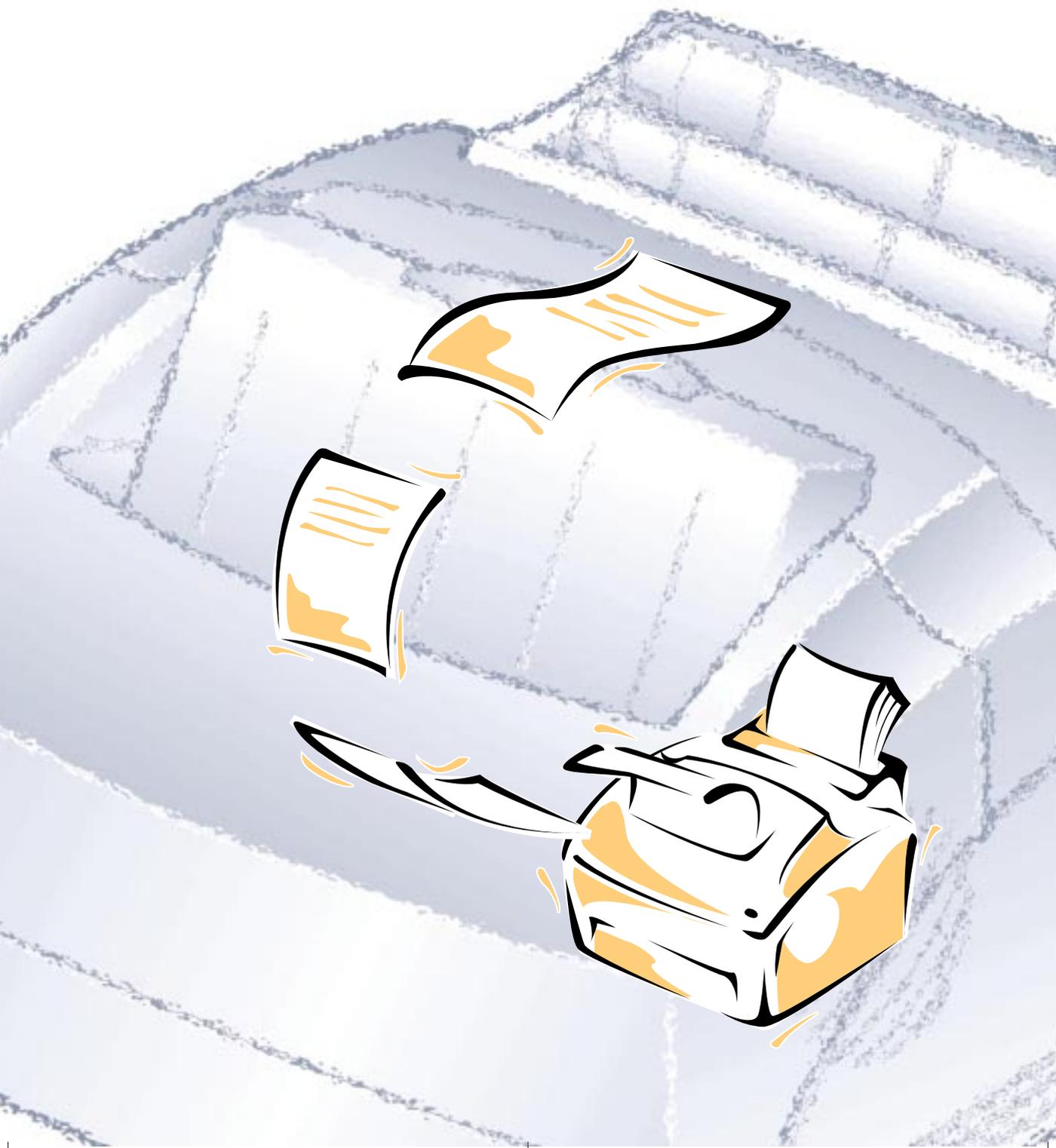




LASER PRINTER ML-5100A

User's Manual

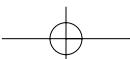




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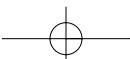
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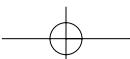
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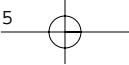
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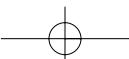
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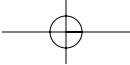




Visit us at **<http://samsungelectronics.com>**
If you have access to this online service, you can download
the User's Guide and drivers from Samsung Electronics.

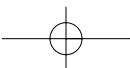
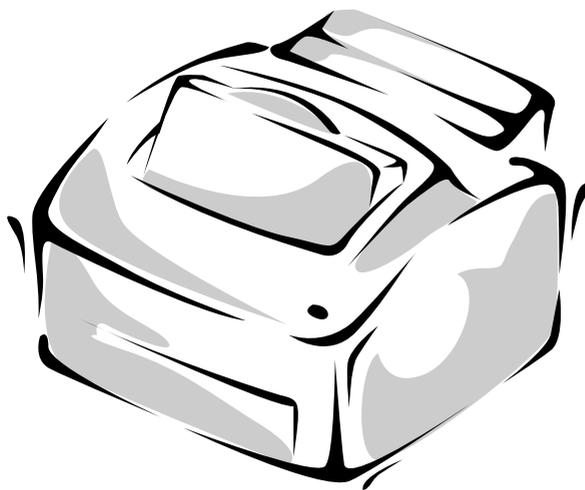
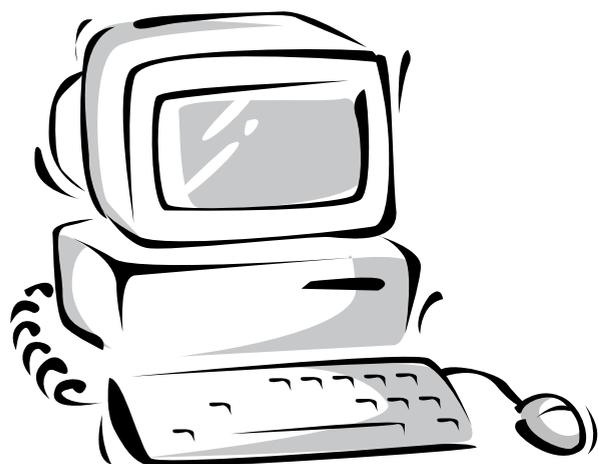
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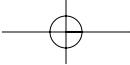




© Chapter 1

Setting Up Your Printer





Unpacking

Remove the printer and all accessories from the packing carton. Save the carton and packing materials in case you need to repack the printer.

Make sure you have the following items:

- Toner cartridge (Please, refer to page 4 and page 5)
- Power cord
- Setup CD-ROM
- This manual

Notes:

- *If you need help during setup, or if any items are missing or damaged, notify your dealer immediately.*
- *You need a Centronics-compatible parallel printer cable. The cable is not shipped with your printer. You can purchase this cable from your dealer or retailer. Make sure the cable is IEEE 1284-compliant. Ask your dealer for assistance if you need help selecting the right cable.*

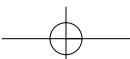
Selecting a Location

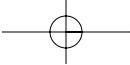
Place your printer on a flat, stable surface near your workstation. Leave enough space around the printer, so that you can easily:

- open the printer cover
- load the paper
- retrieve the paper
- open the front output tray and retrieve the paper from the front output tray
- allow air circulation around the vents to prevent the printer from overheating

Do not place the printer:

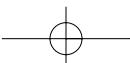
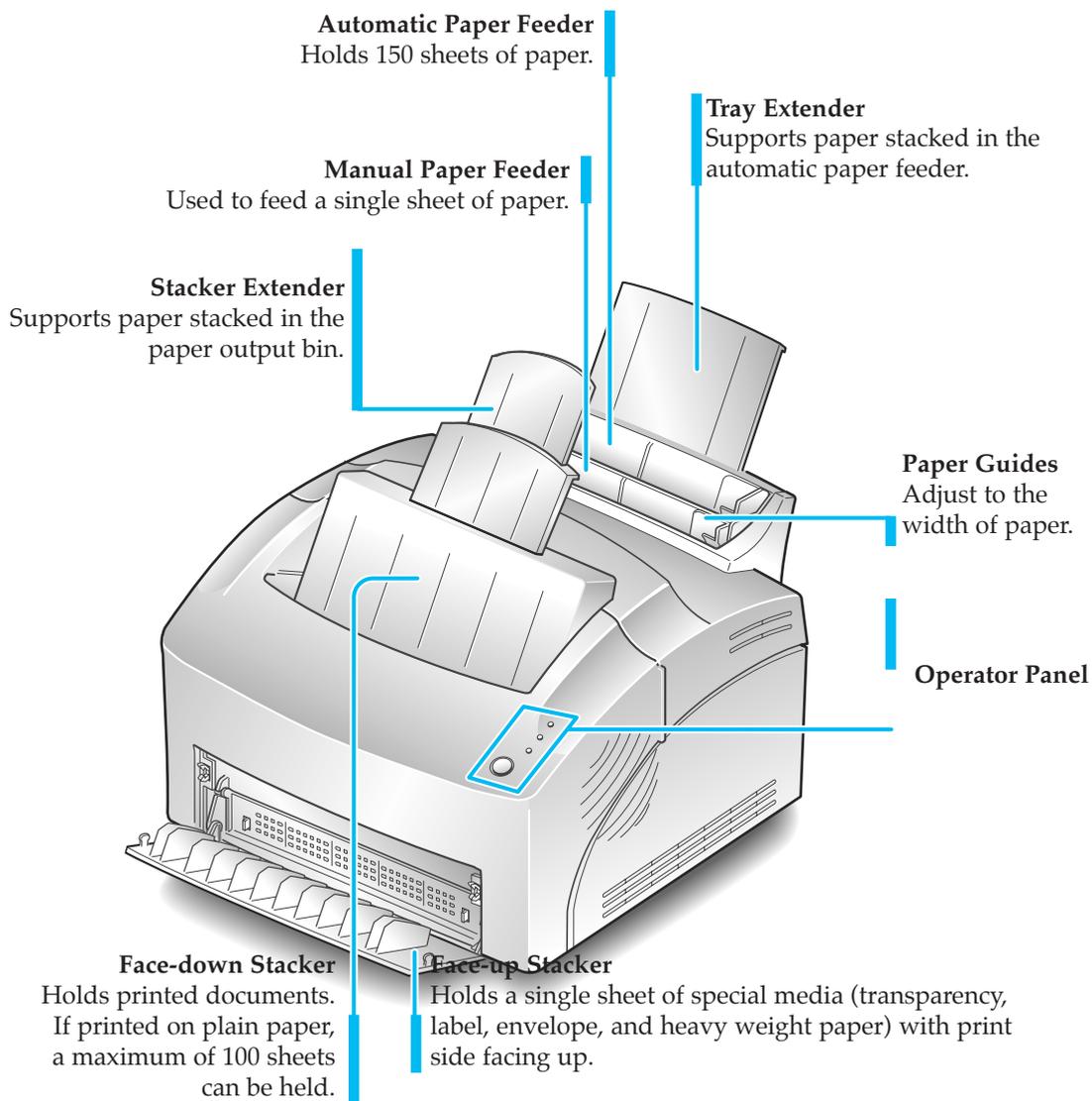
- In direct sunlight
- Near heat sources or air conditioners
- In dusty or dirty environments

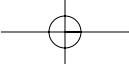




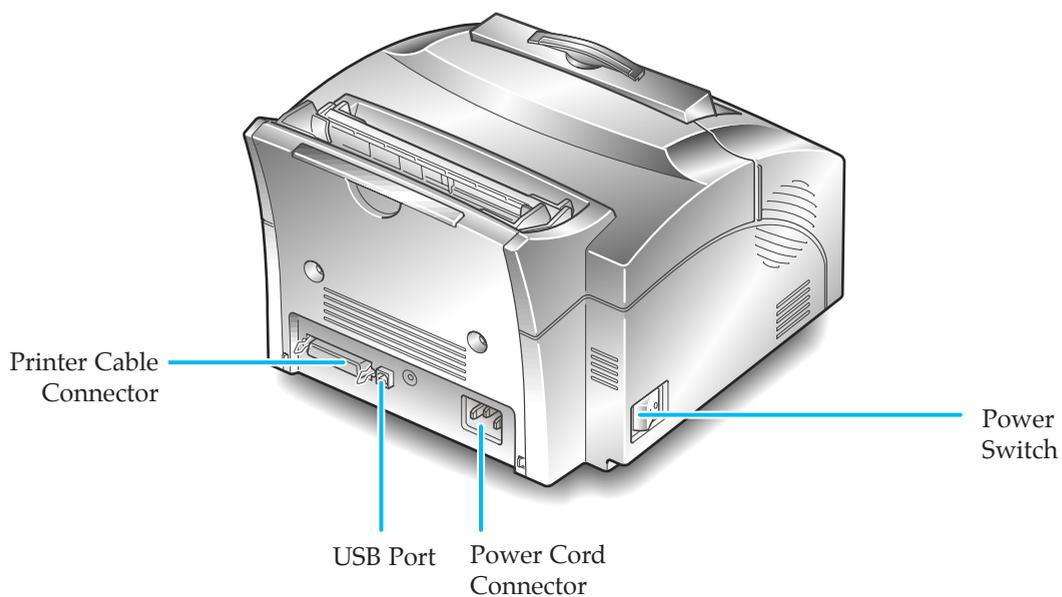
Control Locations and Functions

Front View

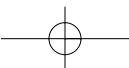
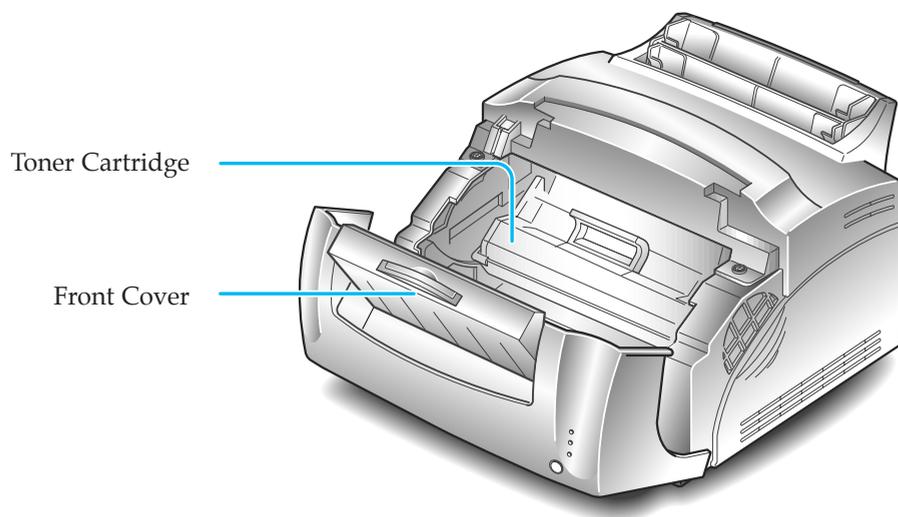


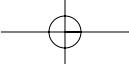


Rear View



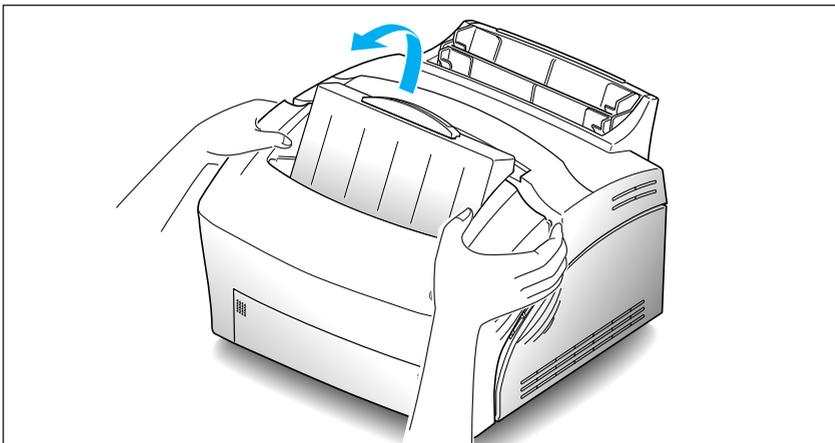
Inside



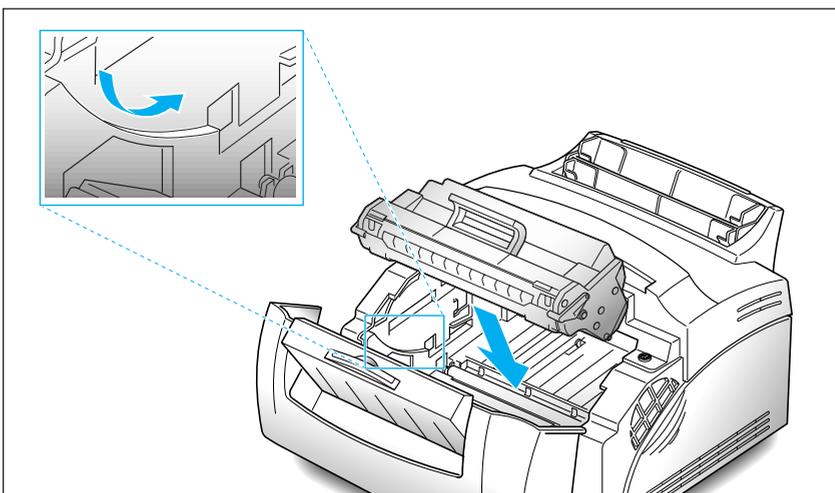


Installing the Toner Cartridge

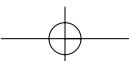
1. To open the printer cover, hold the cover using both hands and pull it toward you.

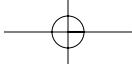


2. Unpack the Toner Cartridge. Carefully remove the sealing tape.
3. Rock the Cartridge 5 or 6 times to distribute the toner.
4. Find the cartridge slots inside the printer, one on each side.
5. Grasp the handle and slide the Cartridge down between the toner cartridge slots, until it drops into place.



6. Close the cover.



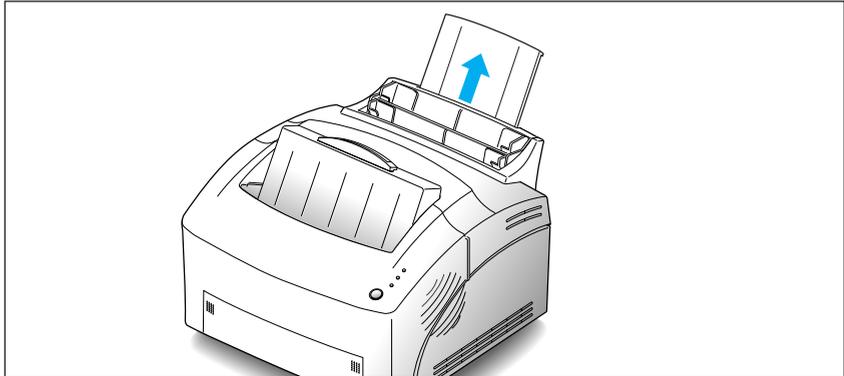


Loading Paper

For best results, use high quality 75g/m² (20 lb) xerographic paper.

Note: For more information on loading paper and other print material, refer to 'Loading Print Material' on page 19.

1. Pull the extender on the automatic paper feeder up, until it stops.

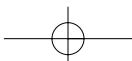
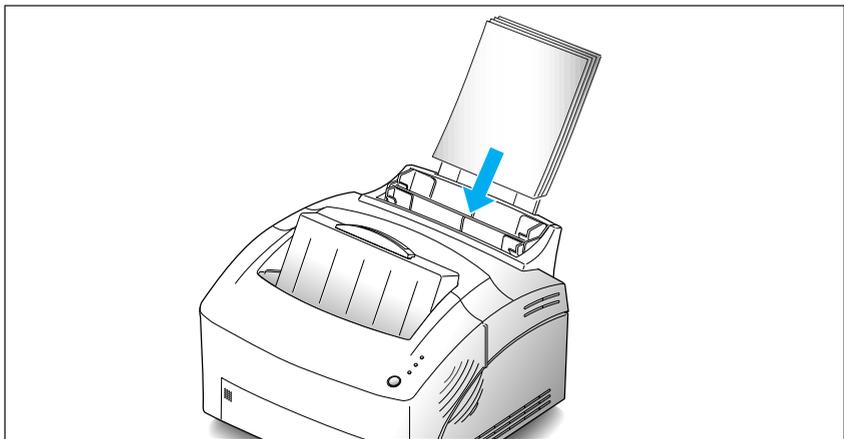


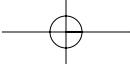
2. Before loading the paper, flex the sheets back and forth to loosen them, then fan them. Tap the edges on a table top to straighten them. Doing this before you load paper helps prevent paper jams.

Don't load too much. This feeder holds up to 150 sheets.

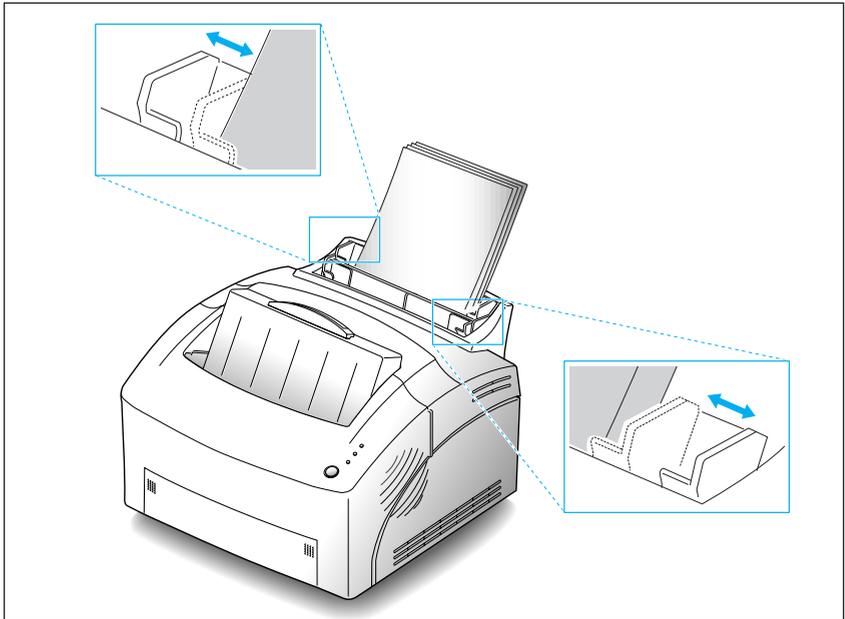
3. Insert the paper in the paper feeder.

If the paper has a preferred print side, place the print side facing you. If you use letterhead paper, load the paper with the letter-head edge down and facing you.

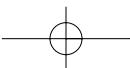
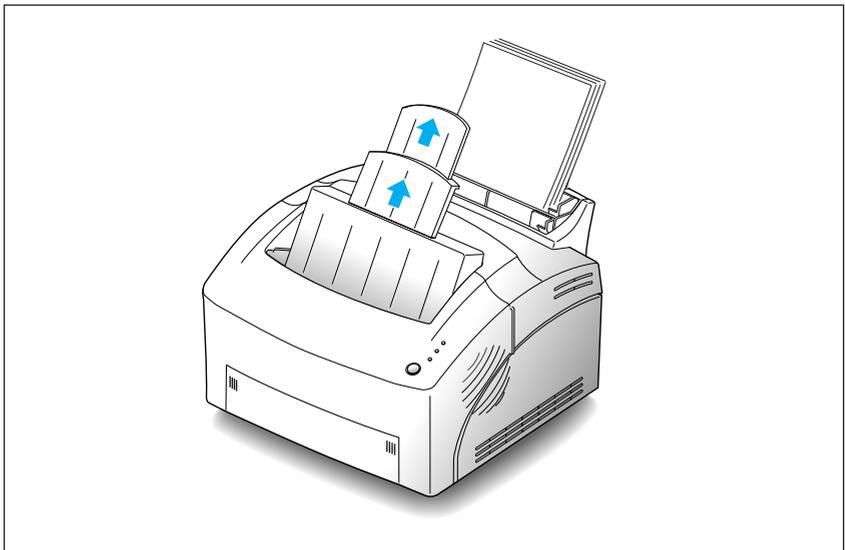


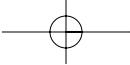


4. Adjust the paper guides to the width of the paper.



5. Pull up the extender on the face-down stacker. The face-down stacker can hold up to 100 printed pages.





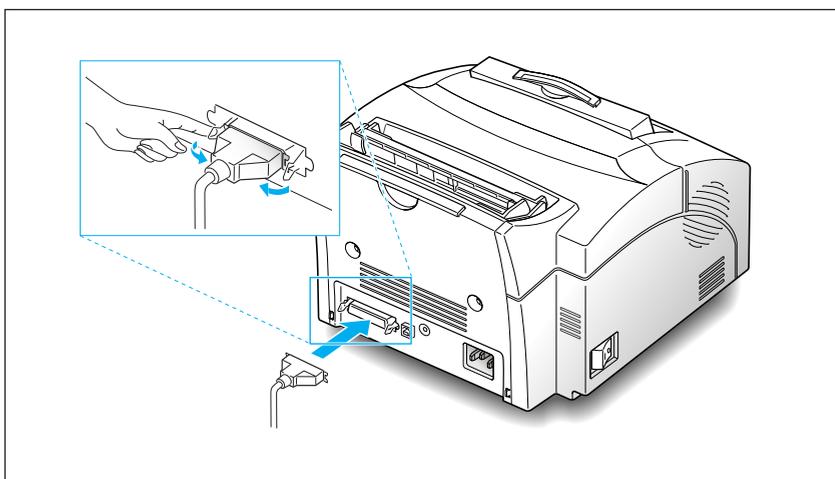
Connecting to Your Computer

Your printer has parallel interface port, which allows you to use it with IBM PCs and compatible computers. You have to purchase a Centronics compatible parallel interface cable that supports bi-directional communications (IEEE standard 1284). Ask your dealer for assistance if you need help selecting the right cable.

Your printer also has Universal Serial Bus (USB) port. The Universal Serial Bus is an interface which allows the printer to be connected to multiple peripheral devices. If your PC has USB port, you can connect your printer to your PC by using USB interface.

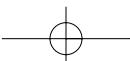
Using Parallel Port

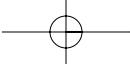
1. **Plug the parallel interface cable into the connector on the back of the printer.** Push the clips at each end of the connector into the notches on the printer cable. The clips snap when pushed into the notches.



2. **Attach the other end of the parallel cable to your computer.**

Note: Make sure the printer power is off when you connect it to the computer.

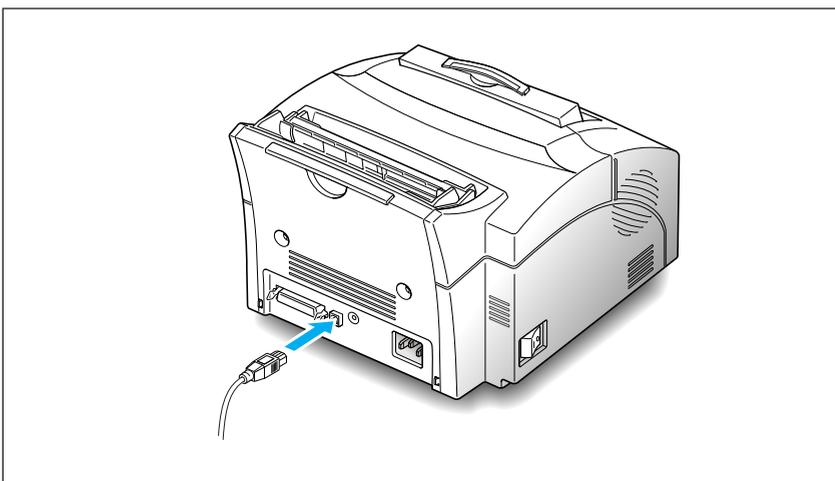




Using The USB Port

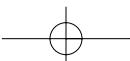
The USB port requires USB v1.0-compliant cable. Ask your dealer for assistance if you need help selecting the right cable.

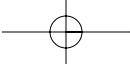
1. Make sure that both the printer and computer are turned off.
2. Plug the USB cable into the connector on the back of the printer.



3. Connect the other end of the cable to the USB port on your computer. See your computer documentation if you need help.

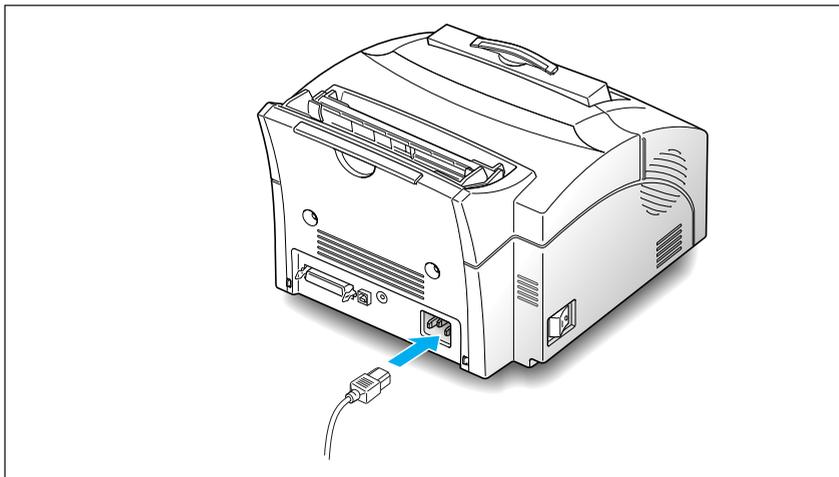
Note: To print using USB interface, you must install the USB driver. See page xx.



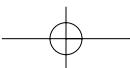
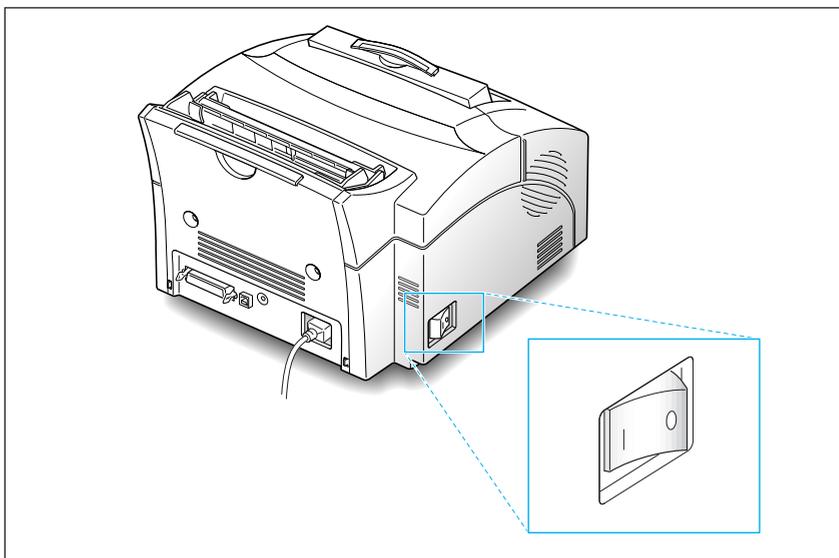


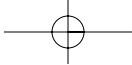
Powering On the Printer

1. Plug one end of the power cord into the connector at the back of the printer, and the other end into a wall outlet.

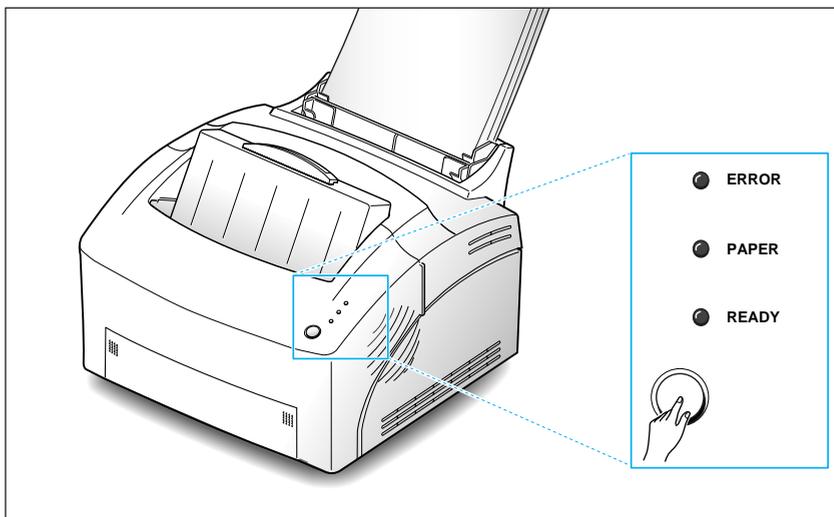


2. Turn the printer on. As the printer powers up, all control panel lights turn on briefly.





- When only the READY light is steadily on, press and hold the button for about 3 seconds. All the indicators blink. Then let it go when each indicator starts to blink in turn. A test page should print out.

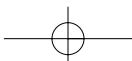


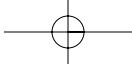
Installing Software

Included with your printer is a CD-ROM containing printer drivers for some of the most popular Windows software applications. To operate your printer, you must install a printer driver, which translates data from your application into data the printer understands. (Installation procedures follow this section.)

The CD-ROM shipped with your printer contains the following printer drivers and utilities.

- **PCL 5e printer driver** for Windows 95/98, Windows 3.1x and Windows NT 4.0
- **PCL 6 printer driver** for Windows 95/98.
- **Status Monitor** enables you to monitor the status of print jobs.
- **Remote Control Panel**, which allows you to set up your printer to work properly with Window applications run inside a Windows 3.1/95/98 or NT Windows.
- **USB driver**, which allows your printer to connect USB peripheral.





Installing Printer Driver

System Requirement

Before you start, make sure you have the following computer setup. (These are the minimum requirements.)

- IBM or compatible with a 386 or higher processor
- Windows 95, Windows 98, Windows 3.1x, or Windows NT
- 4 MB of available hard disk space
- 4 MB of RAM
- Centronics-compatible parallel cable (IEEE 1284-compliant)

Windows 95/98/NT4.0 Installation

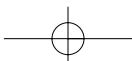
1. Turn on the computer and start Windows.

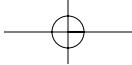
If Windows 95/98 recognizes the new printer, go to the section *“Windows 95/98 Plug and Play”* on page 13.

2. Insert the setup CD-ROM into your CD-ROM drive.

If Windows does not automatically run the CD-ROM, go to the section *“If Windows Does Not Run the CD-ROM”* on page 13.

3. Click the language you want.





4. Click the Item you want to install.



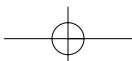
5. Follow the instructions on the screen.

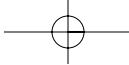
Windows 95/98 Plug and Play

1. At the 'New Hardware Found' dialog box, click on the **OK** button.
2. Insert the setup CD-ROM into your CD-ROM drive.
3. Follow the instructions on the screen.

If Windows Does Not Run the CD-ROM

1. Select **Run** from the **Start** menu.
2. Type **d:\setup.exe** on the command line (where "d" is your CD-ROM drive letter), then click **OK**.
3. Follow the instructions on the screen.





Windows 3.1x Installation

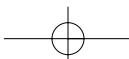
1. Make sure the printer is plugged and connected to your computer. Turn on your printer and computer.
2. Insert the CD-ROM disk into your CD-ROM drive.
3. From the Program Manager window, double-click **Main**, and **File Manager**.
4. From the File Manager window, select your CD-ROM drive, execute `setup16.exe` and click the language you want.

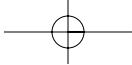


5. Click the Item you want to install.



6. Follow the instructions on the screen.





Uninstalling the Printer Driver

An uninstall utility is supplied with the printer driver to enable you to remove the driver and all associated files from your hard disk, if so required.

To uninstall the driver, proceed as follows:

Windows 95/98/NT 4.0: From the **Start** menu, select **Programs**, **Samsung ML-5100A**, **Uninstall Samsung ML-5100A Driver**.

Installing Printer Utilities (USB & Remote Control Panel)

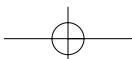
Windows 3.x Installation

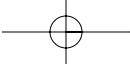
1. From the Program Manager window, double-click **Main**, and **File Manager**.
2. From the File Manager window, select your CD-ROM drive, execute `setup16.exe` and click the language you want.
3. Select the language you want.
4. Select the **Item** you want to install.
5. Follow the instructions on the screen.

Windows 95/98/NT 4.0 Installation

1. Select **Run** from the **Start** menu.
2. Type `d:\setup.exe` on the command line (where 'd' is your CD-ROM drive letter), and click **OK**.
3. Select the language you want.
4. Select the **Item** you want to install.
5. Follow the instructions on the screen.

* You can install the USB Driver in the Windows 98.





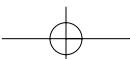
Printing on Network Printer

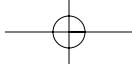
Setting Up Host PC Printer

1. Start Windows.
2. Click **Start**, select **Control Panel**, and double-click on the **Network** icon.
3. Click **File and Print Sharing**, check box(es), then click **OK**. Close the window.
4. Click **Start** and select **Printers** from **Settings**, then double-click your printer name (**ML-5100A**).
5. Select **Properties** in Printer menu.
6. Click the **Sharing** tab, then check **Shared As**, fill in the Shared Name field, and click **OK**.

Client PC Sharing Setup

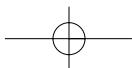
1. Right-click the **Start** button, and select **Explore**.
2. Open your network folder in the left column.
3. Right-click the shared name, and select **Capture Printer Port**.
4. Select the port you want, click **Reconnect at log on** check box, the click **OK** button.
5. From the **Start** menu, select **Settings**, then **Printers**.
6. Double-click your printer icon (**ML-5100A**).
7. From the **Printer** menu, select **Properties**.
8. Press the **Details** tab, select the printer port, then press **OK** button.

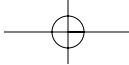




© Chapter 2

Paper Handling





Selecting Paper Types and Feed Source

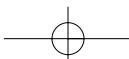
One of the most important things you can do to assure the best possible print quality from your printer is to select the correct paper. Your printer produces letter quality output on most plain bond papers, including cotton bond and photocopying papers; it does not require special papers. However, the print quality varies with different paper types. Be sure to test a small quantity of paper before you purchase a large quantity.

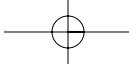
You can print on any of the following paper types:

Type	Size	Feed Source	Capacity
Plain paper (20 to 30 lb)	Letter: 8 1/2 x 11" Legal: 8 1/2 x 14" Executive: 7 1/4 x 10 1/2" A4: 210 x 297 mm A5: 148 x 210 mm B5: 182 x 257 mm Folio: 8 1/2 x 13" Custom size	Automatic feeder	150 sheets (Approx.)
		Manual feeder	1 sheet
Envelopes	COM-10: 4 1/8 x 9 1/2" Monarch: 3 7/8 x 7 1/2" C5: 162 x 229 mm C6: 114 x 162 mm DL: 110 x 220 mm	Automatic feeder	10 envelopes (Approx.)
		Manual feeder	1 envelope
Transparency		Automatic feeder	10 items (Approx.)
Film Paper Labels		Manual feeder	1 item

Notes:

- When you print, select the correct paper size and source in your application.
- Depending on paper thickness, the maximum capacity may be reduced.



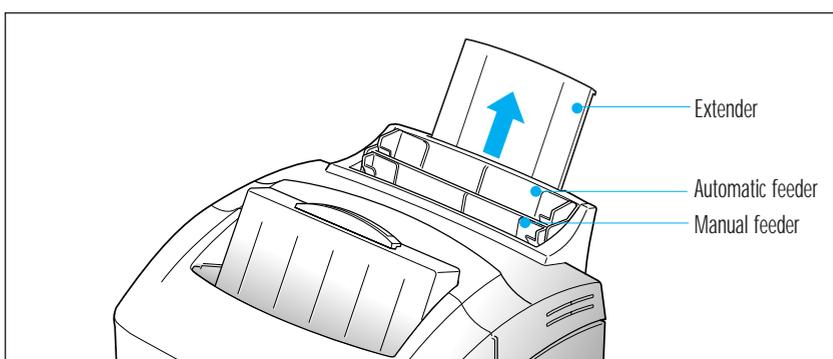


Loading Print Material

You can stack paper, envelopes, card stocks, labels, or transparencies in the automatic paper feeder to feed automatically. The automatic feeder can hold a maximum of 150 sheets of plain paper, and 10 envelopes or other print media. The maximum capacity may reduce, depending on the thickness.

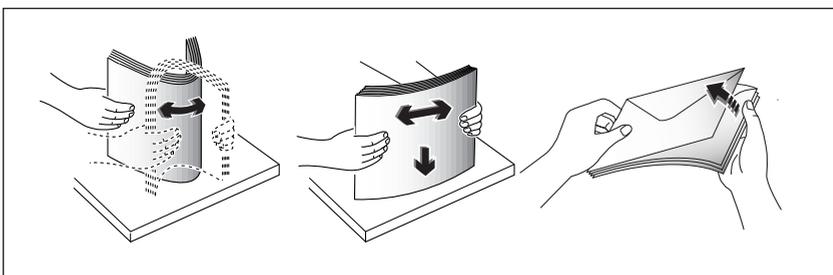
Note: If you experience feeding problems, try printing one at a time from the manual feeder. See page 23.

1. Pull the extender on the automatic feeder up until it stops.

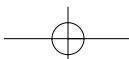


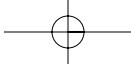
2. Prepare the print material for loading.

- For paper and envelopes:
 - Flex paper or fan envelopes back and forth. Do not fold or crease the paper. Straighten the edges on a level surface.

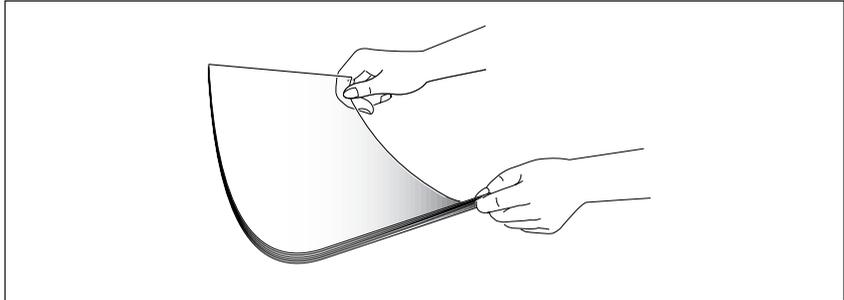


Note: If envelopes jam while printing, try reducing the number of envelopes in the automatic feeder.

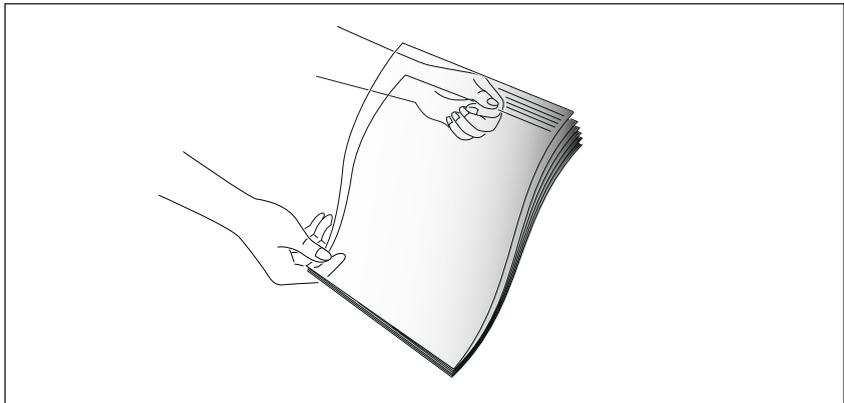




- For transparencies:
 - Hold the transparencies by the edges and avoid touching the print side.

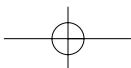
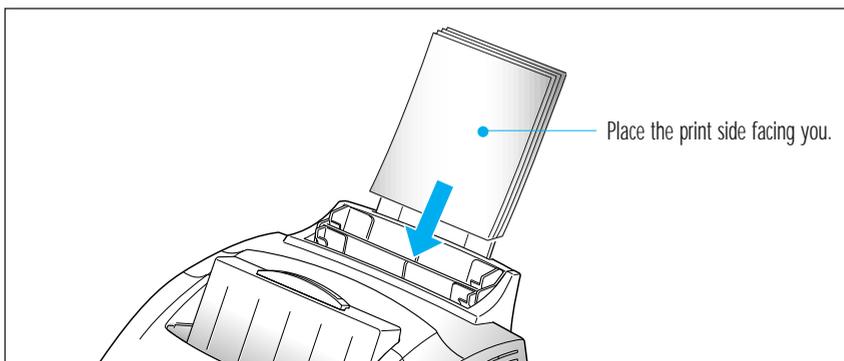


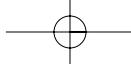
- Fan the stack of transparencies to prevent feeding failures. Be careful not to scratch or leave fingerprints on the print sides.



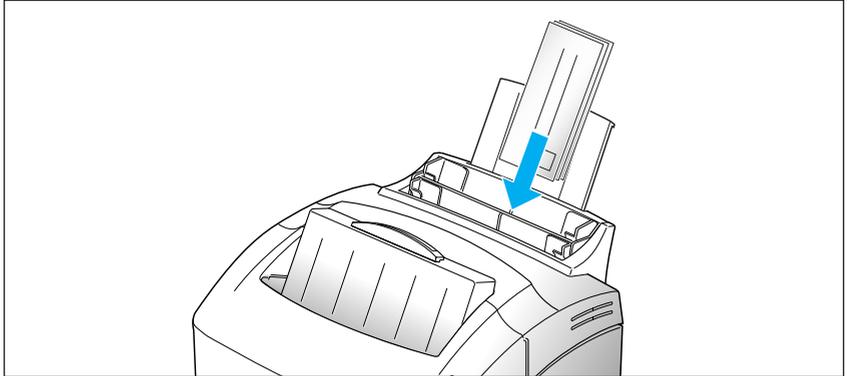
3. Load the print material in the automatic feeder. Do not load too much print material. Do not mix types. See the following directions to load each type of print material.

- Load paper or transparencies with the print side facing you.





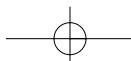
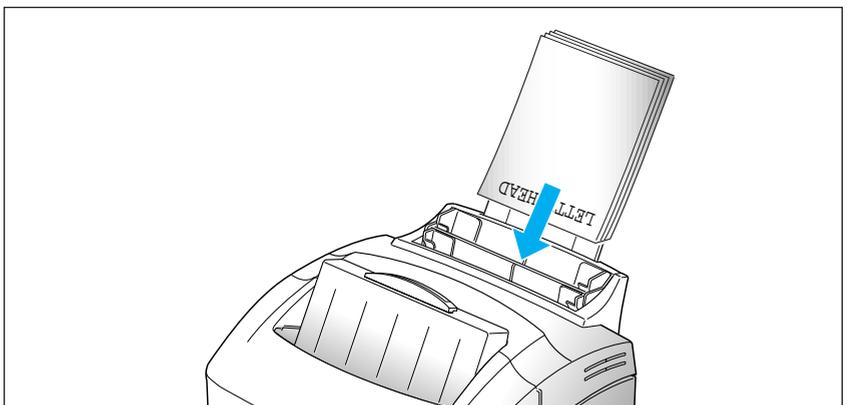
- Load envelopes with the flap side facing away from you. The stamp area is on the right side. The end of the envelope with the stamp area enters the feeder first.

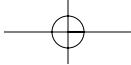


Notes:

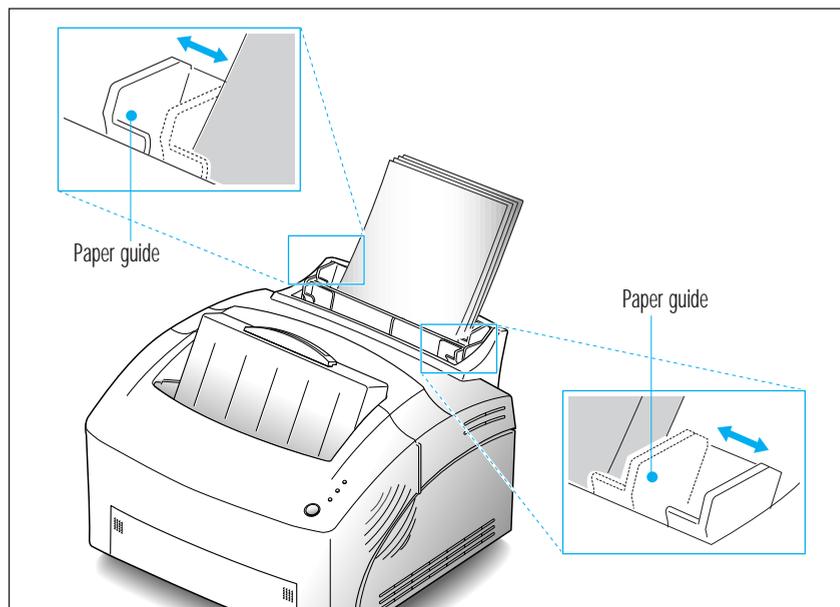
- Do not feed stamped envelopes. The stamp is shown for placement only.
- Never use envelopes with clasps, snaps, windows, coated lining, or self-stick adhesives.
- These envelopes may severely damage the printer.

- Load letterhead paper with the design facing you. The top edge of the sheet with the logo should enter the printer first.

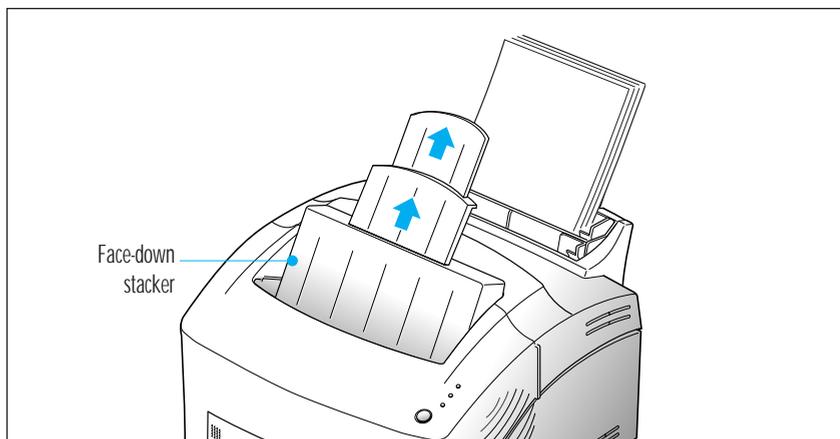




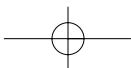
4. **Adjust the guides to the width of the print material.** Slide the guides until they lightly touch the stack of print material. Do not bend the print material.

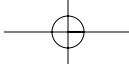


5. **Pull up the extender on the face-down stacker.** The face-down stacker can hold a maximum of 100 printed pages.



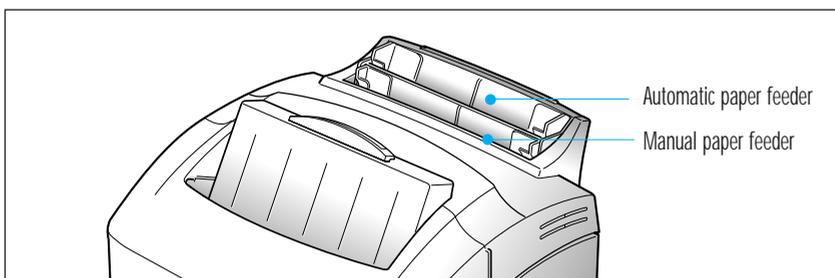
6. Before starting your print job, make sure you select the correct paper size and feed source in your application.





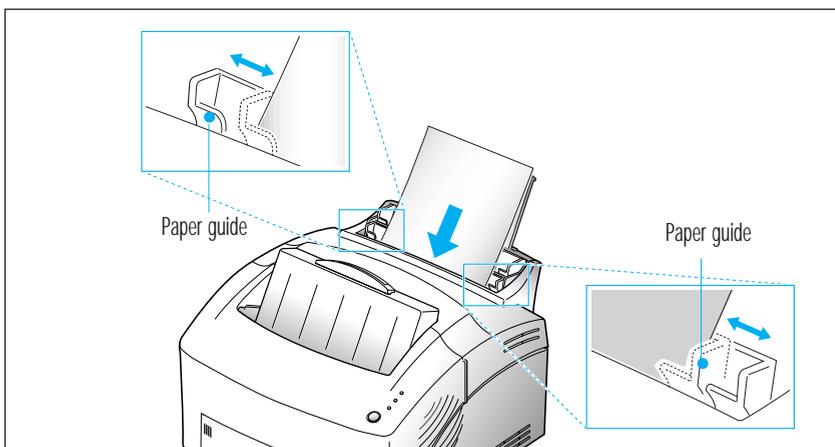
Feeding Manually

Use the manual feeder to feed one sheet at a time into your printer. The manual feeder is in front of the automatic feeder.



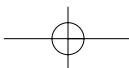
1. If necessary, open the face-up stacker. See page 24.
2. Load the print material in the manual feeder and adjust the paper guides to the width of the print material.

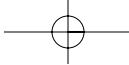
See the instructions to load each type of material on page 18.



3. Push it all the way in.
4. Before starting your print job, make sure you select the correct paper size and feed source in your application.
5. Press the button on the operator panel. Printing starts.
6. If you have more than one page to print, the PAPER indicator blinks to alert you to feed the next sheet each time the printer is ready to print the next page. Press and hold the button for about 2 seconds until the printer pulls in the paper, and starts printing.

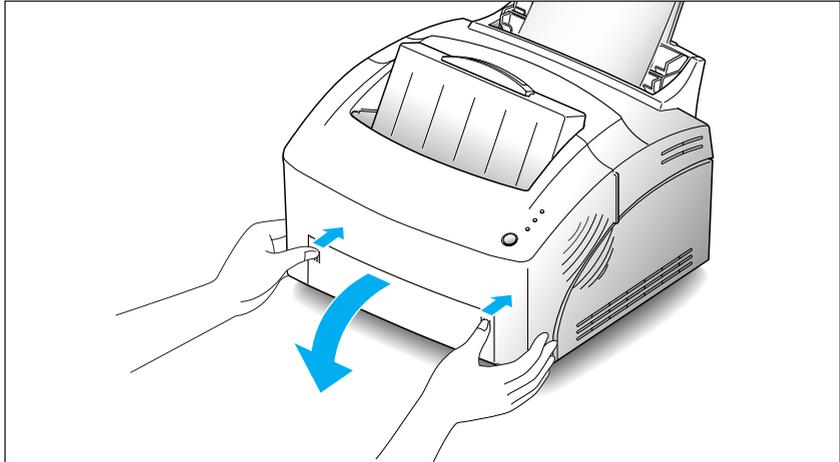
Note: If you press the button without paper in the manual feeder, the printer will automatically use paper into the automatic paper feeder.



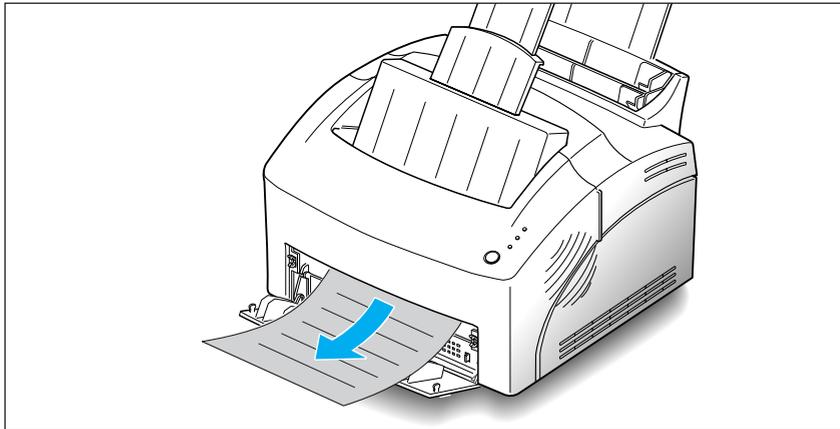


Using Face-up Stacker

1. Push both sides of the stacker marked  , and the stacker will open.

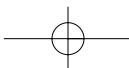


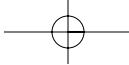
2. If you use the face-up stacker, printed pages exit through the front output path, with the printed side up.



Notes:

- The face-up stacker may not hold the printed materials properly.
- The printed pages will not stack in the standard face-down stacker unless you close the face-up stacker. The face-down stacker can hold up to 100 printed pages. When you finish using the face-up stacker, you must close the face-up stacker.

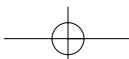


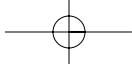


Paper Guidelines

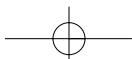
When selecting or loading paper, envelopes, or other special media, keep these guidelines in mind:

- Attempting to print on damp, curled, wrinkled, or torn paper can cause paper jams and poor print quality.
- Use cut-sheet paper only. You cannot use multipart paper.
- Use only high quality, copier grade paper. Avoid paper with embossed lettering, perforations, or texture that is too smooth or too rough.
- Colored paper should be of the same high quality as white photocopy paper. The pigments must withstand the printer's fusing temperature of 392 °F (200 °C) for 0.1 second without deterioration. Do not use paper with a colored coating that was added after the paper was produced.
- Pre-printed forms must be printed with non-flammable, heat-resistant inks that do not melt, vaporize, or release hazardous emissions when subject to the printer's approximately 392 °F (200 °C) fusing temperature for 0.1 second.
- Store paper in its ream wrapper until ready to use. 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.
- During storage, moisture-proof wrap (any plastic container or bag) should be used to prevent dust and moisture from contaminating your paper.
- Always use paper and other media that conform with those listed under 'Specifications' on page 60.
- When you choose envelopes, use only well-constructed envelopes with sharp, and well creased folds.
 - DO NOT use envelopes with clasps and snaps.
 - DO NOT use envelopes with windows, coated lining, self-stick adhesives, or other synthetic materials.
 - DO NOT use damaged or poorly made envelopes.





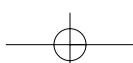
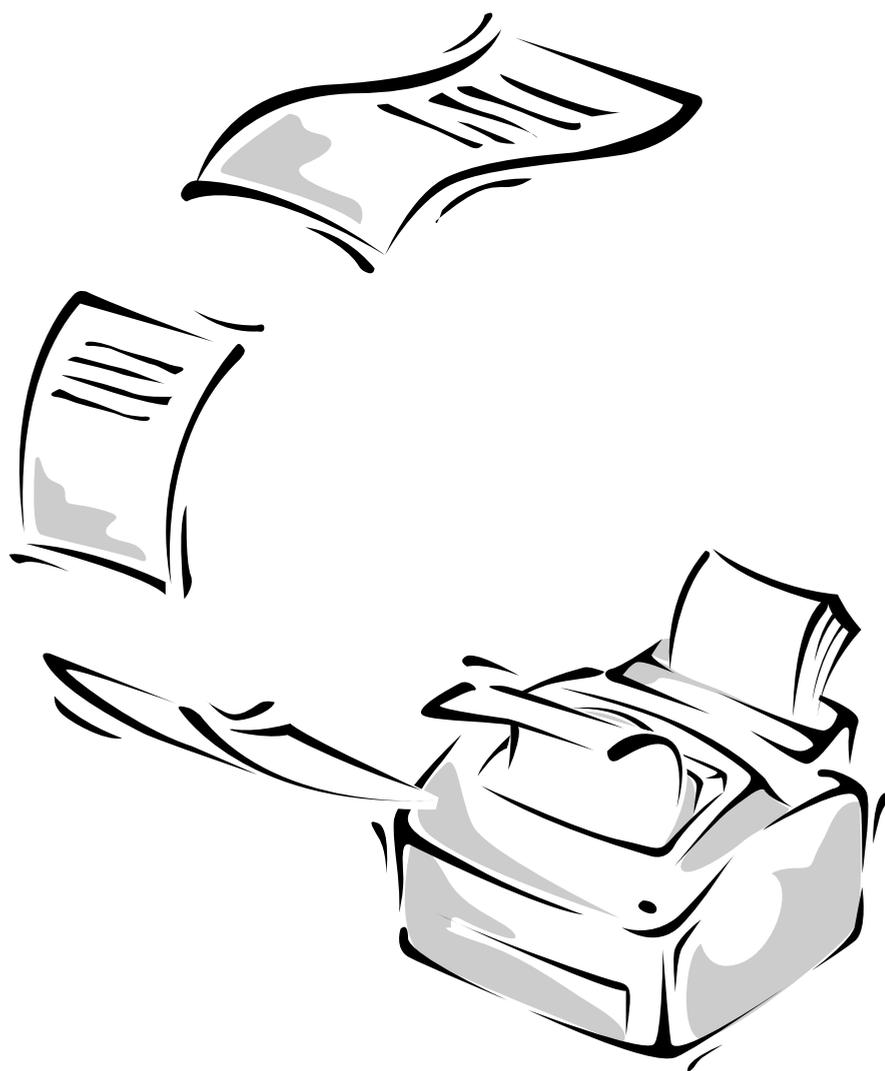
MEMO





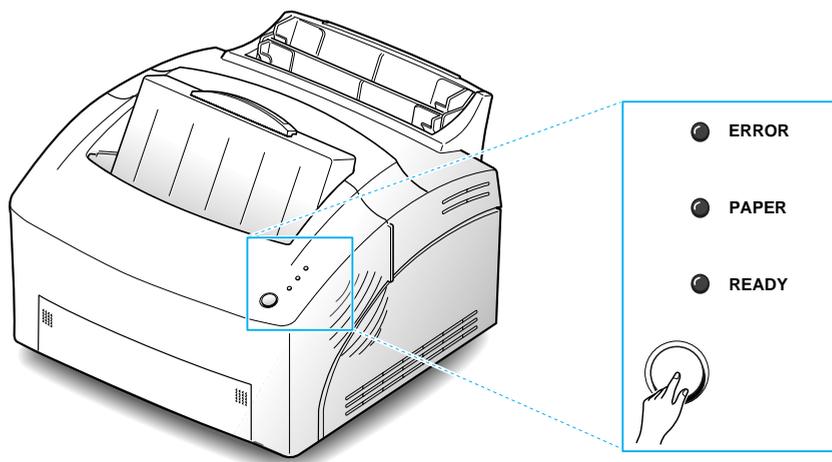
© Chapter 3

Operating Your Printer



Operator Panel

The operator panel has the indicator lights and one button. Depending on the light sequence, pressing the button activates different printer functions, such as resetting the printer, or running self-test. See page 29.



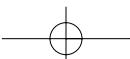
Indicator Lights

INDICATOR	DESCRIPTION
READY (on)	The printer is ready to receive and process data.
READY (blink)	The printer is receiving or processing data, or the print engine is running.
READY (off)	The printer is off-line.
ERROR (on)	<ul style="list-style-type: none"> • There is no image cartridge installed, or the cover is open • Print error occurs. • If PAPER light is also on, there is a paper jammed.
ERROR (blink)	The printer memory is insufficient for printing.
PAPER (on)	The paper bin is empty.
PAPER (blink)	The printer is in manual feed mode and waiting you to feed paper into the manual feeder.
All lights Blinking	System error occurs.



Button Function

FUNCTION	USAGE
On-line/Off-line	Pressing the button toggles the printer between on-line (READY light on) and off-line (READY light off) status.
Manual Feed Start	<p>When you print a file if you have selected 'Manual Feed' source, the printer waits you to feed paper into the manual feeder. When you are ready, press and hold down the button for about 2 seconds.</p> <p>The printer pulls in the page, and starts printing.</p> <p>Press the button each time you feed paper manually.</p>
Reset	<p>To clear all data from the printer's memory except permanent fonts and macros, and then restore the user default settings:</p> <p>Press the button to turn the printer off-line. With the READY light off, press and hold down the button until all lights are blinking (approximately four seconds), then release the button.</p>
Self-test	<p>To perform a printer self-test:</p> <p>While the printer is on-line (READY light on), press and hold down the button until all three lights are blinking (approximately four seconds), then release the button. A one-page printer status sheet will be printed.</p>
Image Cartridge Cleaning	<p>To remove excess toner from the image cartridge: While the printer is on-line (READY light on), press and hold down the button until all three lights remain lit (not blinking; approximately seven seconds) and the printer begins to cycle up (starts feeding paper), then release the button. One sheet will be printed.</p>





Selecting Your Printer

To use all of the features of your Samsung ML-5100A printer, make sure it is selected as the default printer. When you install the printer driver, Samsung ML-5100A is automatically set as the default printer. If you use more than one printer, select ML-5100A as the default printer as follows:

Windows 95 / 98

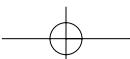
1. Select **Start, Settings, then Printers.**
2. Double-click **Samsung ML-5100A PCL5e or Samsung ML-5100A PCL 6.**
3. Select **Set As Default** from the **Printer** menu.

Windows 3.x

1. Double-click the **Control Panel** icon from the **Main** program group.
2. Double-click the **Printers** icon.
3. Select **Samsung ML-5100A PCL5e or Samsung ML-5100A PCL 6.**
4. Click **Set As Default Printer.**

Windows NT 4.0

1. Select **Start, Settings, then Printers.**
2. Double-click **Samsung ML-5100A PCL**
3. Select **Set As Default** from the **Printer** menu.



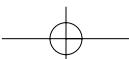


Printing a Document

This procedure describes the general steps required for printing from various Windows applications. The exact steps for printing a document may vary depending on the application you are using. Refer to your application's documentation for the exact printing procedure.

1. **Start the program you are using to create the document, and/or open the document you want to print.**
2. **Choose Print or Print Setup from the File menu.** The Print or Print Setup dialog appears to make changes to the printer setting.
3. **If you click on Properties, Setup, or Options in the dialog box, you'll access the printer driver and you can make any additional setting as appropriate for printing your document.** See 'Print Settings' on page 32. The settings you can change depend on the printer you selected.
4. **Select OK to close the dialog box.**
5. **After making any necessary changes to the print parameters, select OK to start the print job.**

Note: The way you access the printer driver varies depending on the programs you use.





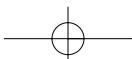
Print Settings

Most Windows applications allow you to make changes to the printer settings. This changes the number of copies, sequence of the pages, paper orientation, and margins.

If you click **Properties**, **Setup**, or **Options** in the Print dialog box, you'll access the printer driver's dialog box. It allows you to change additional printer settings.

Note: Most Windows applications will override settings you specify in the printer driver. Change all printer settings available in the software application first, and any remaining settings with the printer driver.

Samsung ML-5100A PCL5e printer driver shows the dialog box as shown below. It includes 4 tabs.





Setup

Using this tab, you can change the number of copies, print resolution, page orientation, paper size, and feed source.

For detailed information about each setting, click **Help** at the bottom of the dialog box.

Advanced Setup

Using this tab, you can change graphic settings; graphic mode, grey scale, graphic quality. It also includes settings that determines how the printer handles True Type font. When you upgrade your printer memory, you have to set the correct memory size using this tab.

For detailed information about each setting, click **Help** at the bottom of the dialog box.

RCP

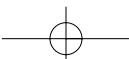
Using this tab, You can change Econo mode and SRT mode.

For detailed information about each setting, click Help at the bottom of the dialog box.

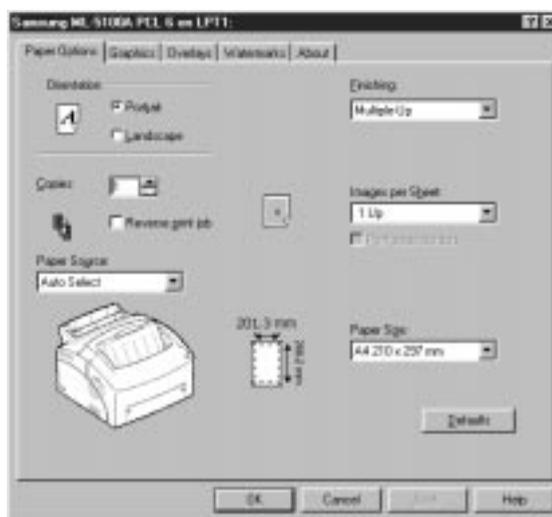
About

This tab shows the software version and useful information about your printer.

Default button at the bottom of the dialog box restores the factory default setting.



Samsung ML-5100A PCL 6 driver includes 5 tabs.



Paper Options

Using this tab, you can change the number of copies, page orientation, paper size, paper source, and so on. For detailed information about each setting, click **Help** at the bottom of the dialog box.

Graphics

Using this tab, you can change graphics mode, resolution, text mode, toner saver, and so on. For detailed information about each setting, click **Help** at the bottom of the dialog box.

Overlays

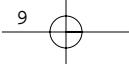
Using this tab, you can create, delete and load overlay. For detailed information about each setting, click **Help** at the bottom of the dialog box.

Watermarks

Using this tab, you can edit, save, delete and control watermark. For detailed information about each setting, click **Help** at the bottom of the dialog box.

About

This tab shows the software version and useful information about your printer.



Remote Control Panel (RCP) for Windows User

Windows users can change print setting with the Remote Control Panel, program.

Windows 3.x

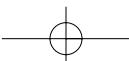
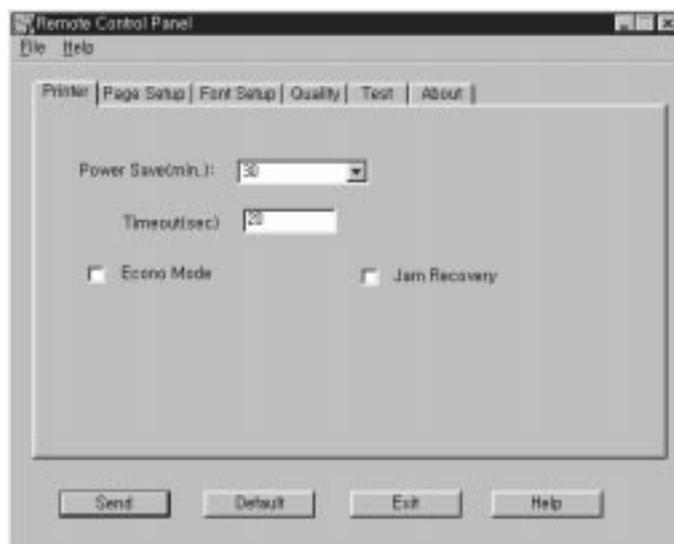
1. From **Program Manager**, double-click **File Manager**.
2. In the "5100util", double-click "**winrcp.exe**".
3. The Remote Control Panel screen appears.

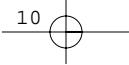
After you change settings, you must send it to the printer by pressing the **Send** button.

Windows 95/98/NT 4.0

1. Select "**Program**" from the "**start**" ment.
2. Select "**Samsung ML-5100A utility**".
3. Click "**Remote Control Panel**".
4. The Remote Control Panel screen appears.

After you change settings, you must send it to the printer by pressing the **Send** button.





The Remote Control Panel dialog box includes six tabs.

PRINTER

Power Save

Determines the length of time the printer waits after a job is printed before it goes to a reduced power state. If the printer is used constantly, select **OFF** which keeps the printer ready to print with the minimum warm-up time. This uses more energy to keep the printer warm and ready to print.

Timeout

Determines the amount of time in seconds the printer waits before printing the last page of a print job that does not end with a command to print the page.

Econo Mode

To get the most from your toner supply, set **Econo Mode** to **ON**. If you set Econo Mode to **ON**, print quality may be reduced.

Jam Recovery

If paper jams as it exits to the output bin, the data on the jammed page will be lost. If you set **Jam Recovery** feature to **ON**, the printer keeps the image for a printed page until the printer signals that the page has successfully exited the printer. The printer reprints all jammed pages.

With the feature set to **OFF**, the printer does not reprint a page that has jammed.

PAGE SETUP

Paper Size

Sets the paper size.

Lines Per Page

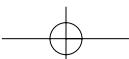
Use this menu item to change the number of lines that print on each page. The setting can range from 5 to 228 lines per page.

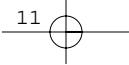
Copies

Sets the number of copies printed for each page.

Orientation

Determines how the printing is oriented on the page.





FONT SETUP

Typeface

Allows you to select the desired typeface. This setting is ignored when the software application specifies a font.

Symbol Set

Determines the symbol set. A symbol set is a set of alphabetic and numeric characters, punctuation, and special symbols used when printing with a selected font.

Pitch

If you chose a scalable monospaced font, you can select the font pitch. Pitch refers to the number of fixed-space characters in a horizontal inch of type.

Point Size

If you chose a scalable typographic font, you can select the point size for the font. Point size refers to the height of the characters in the font. One point equals approximately 1/72 of an inch. You can select point sizes from 4 to 999.75 in increments of 0.25 points.

Font List

Prints the font list showing all the fonts available for PCL emulation.

QUALITY

Density

Determines the overall density of the printed image.

SMET

SMET(Samsung Memory Enhancemant Technology) mode makes the printer process more data by optimizing the memory. With this mode set to **ON**,the complex data can be processed.

SRT

Use the printer's SRT(Samsung Resolution enhancement Technology) setting to produce print with smooth angles, curves and edges.

ENHANCE : Better Text Image

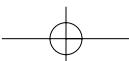
GRAY : Better Photo Image

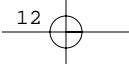
GRAY+ : Better Photo Image & Text Image

You can get 1200 dpi grade printouts by using SRT mode.

ABOUT

This tab shows the software version and copyright information.





Status Monitor(SM) for Win 3.x/95/98 Users

Accessing status monitor.

In Windows 3.x

1. From **Program Manager**, double-click **File Manager**.
2. In the "5100util", double-click "**winsm.exe**".
3. The Remote Control Panel screen appears.

In Windows 95/98

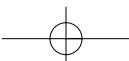
1. Select "**Program**" from the "**start**" ment.
2. Select "**Samsung ML-5100A utility**".
3. Click "**Status Monitor**".
4. The **Status Monitor** screen appears.

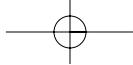


Status Monitor

The status Monitor's dialog message. Show the following meanings.

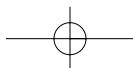
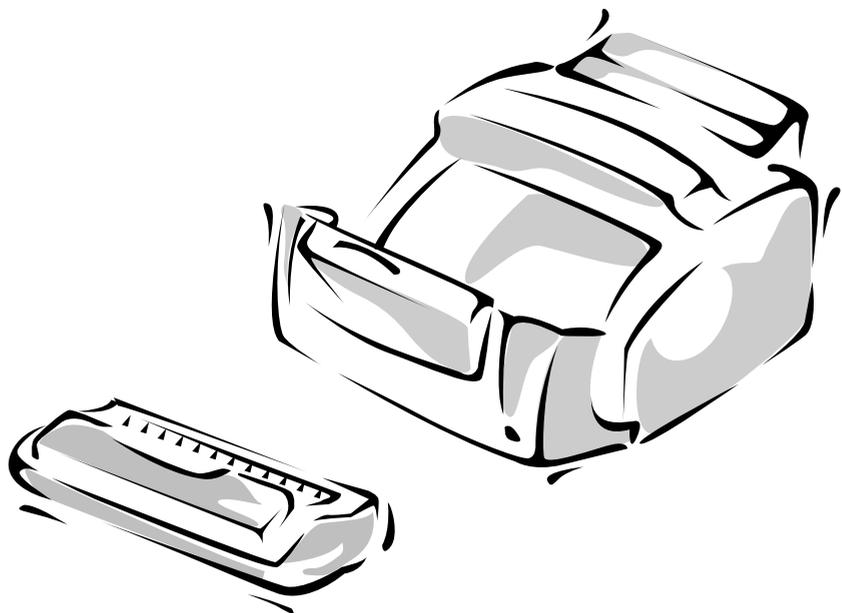
1. **Printer Ready**
It show the printer is ready.
2. **Printer Off-Line**
It show the status of printer is off-line.
3. **Cover open or Missing cartridge**
It show the printer's cover is open or developer cartridge is not installed comedly.
4. **Paper Empty**
It show the printer has run out of paper.
5. **Paper Jam**
There is paper jammed in the printer.
6. **Check print cable or Power**
It show the printer is off or not connected properly.

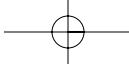




© Chapter 4

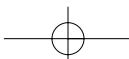
Troubleshooting and Maintenance

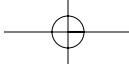




Poor Print Quality

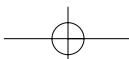
Problem	Action
Light or blurred characters	<ul style="list-style-type: none"> • Hot/humid or cold/dry weather conditions may affect how well toner adheres to paper. Select the next darker print setting. • Turn Econo Mode off using Remote Control Program. • Make sure the Toner Cartridge is installed correctly. • Toner Cartridge may be out of toner. Install a new Cartridge. • Make sure you are using the correct type of paper. See "Selecting Paper Types and Feed Source" on page 18.
Smudged or dark characters	<ul style="list-style-type: none"> • The Toner Cartridge may be defective. Remove it and check for damage. Install a new Cartridge if needed. • Make sure the paper is straight and unwrinkled.
Irregular or missing dots	<ul style="list-style-type: none"> • If printing on transparencies, try changing the fill pattern in your application. • The paper may be too damp. Try printing with a different batch of paper.
Solid black areas on transparencies or paper contain white streaks	<ul style="list-style-type: none"> • Try using a different fill pattern in your application. • The Toner Cartridge may be defective. Remove and check the Cartridge for damage. Install a new Cartridge if needed. • Try a different type of paper. Paper designed for use with xerographic copiers give the best quality.
Poor printer quality	<ul style="list-style-type: none"> • Try a different type of paper. Paper designed for use with xerographic copiers give the best quality. • You may be printing on the wrong side of the paper. Some paper has a right side for printing. If the print quality is not as clear as you would like it to be, try turning the paper over and printing on the other side.
Insufficient memory	<p>A page is printed with the "PCL5e:Insufficient Memory" message. There is not enough memory installed to print the page. Print the page with a lower resolution or expand the printer memory. See page 52 for further details on how to expand the printer memory.</p>

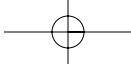




Paper Problems

Problem	Action
Paper sticks together/multiple sheets of paper feed	<ul style="list-style-type: none"> • Remove paper from the paper feeder and flex or fan the paper. • Make sure there is not too much paper in the paper tray. Depending on the thickness of your paper, the automatic feeder holds up to 150 sheets. • Make sure you are using the correct type of paper. See “Selecting Paper Types and Feed Source” on page 18. • Different types of paper may be stacked in the automatic feeder. Load just one type of paper.
Paper fails to feed	<ul style="list-style-type: none"> • Remove paper from the paper feeder and flex or fan the paper. • Make sure the paper source you selected in your application is correct. • Remove any obstructions inside the printer.
Paper skews or buckles	<ul style="list-style-type: none"> • Make sure there is not too much paper in the automatic feeder. Depending on paper thickness, the automatic feeder can hold up to 150 sheets of paper. • Make sure the paper guides do not cause the paper to bow in the paper feeder. • Make sure you are using the correct type of paper. See “Selecting Paper Types and Feed Source” on page 18.
Envelopes skew	<ul style="list-style-type: none"> • Make sure the paper guides do not cause envelopes to bow in the paper feeder. • Make sure the envelopes are loaded properly, and that there are no more than 10 envelopes in the automatic feeder.
Envelopes fail to feed correctly	<ul style="list-style-type: none"> • Try a different kind. Envelopes designed for laser printers will produce the best results. • Envelopes may not match specification for this machine.

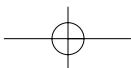


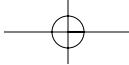


Problem	Action
Transparencies or envelopes do not feed correctly	<ul style="list-style-type: none"> • The film or envelopes may not be loaded correctly. Make sure you load no more than 10 transparencies or envelopes in the automatic feeder. Depending on the thickness, the maximum capacity may need to be reduced. • When you feed into the manual feeder, you must load one sheet at a time.
Repeated paper jams occur	<ul style="list-style-type: none"> • The paper you are using may be causing the jams. Fan the paper before stacking it in the paper feeder. This keeps the sheets from sticking together. • Check that the paper you are using and your printing environment are within the specifications of the unit.

Printing Problems

Problem	Action
Power is turned on but the READY light is not on	<ul style="list-style-type: none"> • Be sure to turn on the printer power switch.
The operator panel indicator lights do not come on when printer is turned on	<ul style="list-style-type: none"> • Make sure the printer power cord is firmly attached at the back of the printer and at the electrical outlet. • Be sure to turn on the printer power switch.
Printer seems to be printing, but pages are blank	<ul style="list-style-type: none"> • Make sure the Toner Cartridge is installed. • The Toner Cartridge may be empty. Install a new Toner Cartridge. • The Toner Cartridge may be defective. Remove and check the Cartridge for damage. Install a new Cartridge if needed.
Printer power is on, but nothing prints	<ul style="list-style-type: none"> • Make sure that the printer interface cable is firmly inserted into the interface connector of the printer. • Print a test page to determine if the problem is with the printer or the PC. If you can print a test page, the problem is in the PC or application. If you can't print a test page, you have a mechanical problem and should call for service. The printer may not be setup properly.

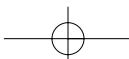


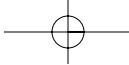


Problem	Action
Printer does not print even though a paper jam has been cleared	<ul style="list-style-type: none"> • Open and close the cover to restart the printer.
Unexpected characters are printed or characters are missing	<ul style="list-style-type: none"> • Change the parallel interface cable. • Make sure you are using the correct printer driver.
Cannot close the printer cover	<ul style="list-style-type: none"> • Make sure the Toner Cartridge is properly installed.
Printout does not match paper size	<ul style="list-style-type: none"> • Paper may not be loaded and aligned correctly in the paper feeder. • The application's paper size and margin settings may be incorrect. • The selected printer driver may be incorrect. Make sure you select the ML-5100A as the default printer in your application.
All indicator lights are blinking	<ul style="list-style-type: none"> • Turn the printer off for a minutes, then turn the printer back on. • If the error persists, contact your dealer or technical support.

Software Problems

Problem	Action
Incorrect fonts	<ul style="list-style-type: none"> • TrueType fonts may be disabled. Use the Fonts dialog box in the Control Panel to enable TrueType fonts.
Half of the page is blank.	<ul style="list-style-type: none"> • The page layout is too complex. Simplify the page layout and remove any unnecessary graphics from the document if possible. You can also lower the print resolution to 300dpi. • The page orientation setting may be incorrect. Change the page orientation in the Printer Setup dialog box. • The paper size and the software paper size settings do not match. Insert the correct paper into the printer or change the software paper size settings.





Problem	Action
The printer prints the wrong data, or it prints incorrect characters.	<ul style="list-style-type: none"> • The printer cable might not be connected properly. Check the printer cable connection. • There may be a problem with the printer driver software. Exit Windows and reboot the computer. Turn the printer off and then back on again. • The printer cable specifications may be incorrect. Use the printer cable supplied with the printer or replace the cable with an IEEE-1284 rated cable.
Printing is too slow.	<ul style="list-style-type: none"> • If using Windows 3.x, Print Manager may be disabled. From the Control Panel Printers menu, check the Use Print Manager box. • If using Windows 95, the Spooling Setting may be set incorrectly. From the Start menu, select Settings and Printers. Click the Samsung ML-5100A PCL5e icon with the right mouse button, select Properties, click the Details tab, and then click the Spool Settings button. Select the desired spool setting from the available choices. • The computer may have insufficient random-access memory (RAM). Install more random-access memory (RAM) in your computer.

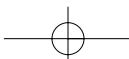
Before You Call For Service

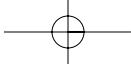
If you're unable to solve printer problems, you may want to call for service. Before calling, however, check these things:

- Is the power cord plugged into the printer?
- Is the power cord plugged directly into a wall outlet?
- Is your printer connected properly to your computer?
- Are all other devices attached to your printer plugged in and turned on?
- Is the wall outlet live?
- Has a power outage occurred in your area?
- Is a Toner Cartridge installed in the printer?
- Is the cover closed completely?

Once you've checked all these things, turn your printer off and back on again. If your printer is still not operating properly, call your point of purchase for service.

If the READY light is on, print out a test page by pressing the operator panel button until each of the indicators start to blink in turn, and release the button. The Test Page lists your printer model, any options installed, and the user default settings. The service representative will probably ask for this information.

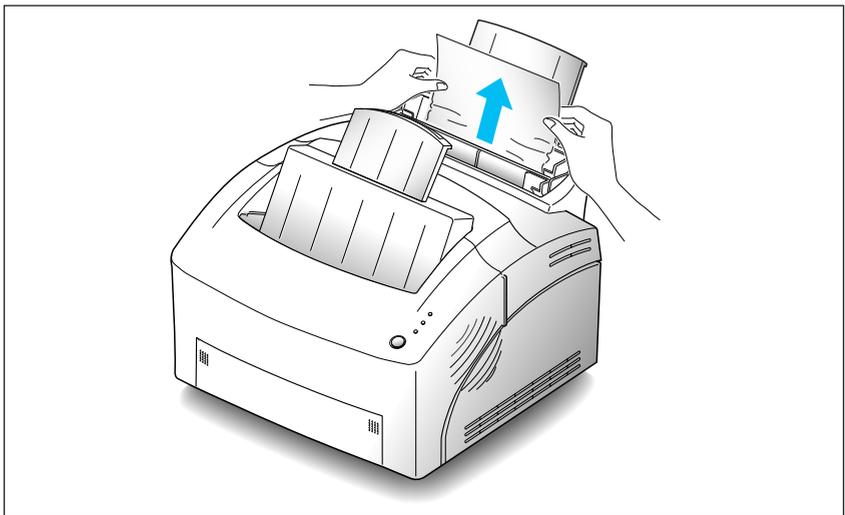




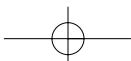
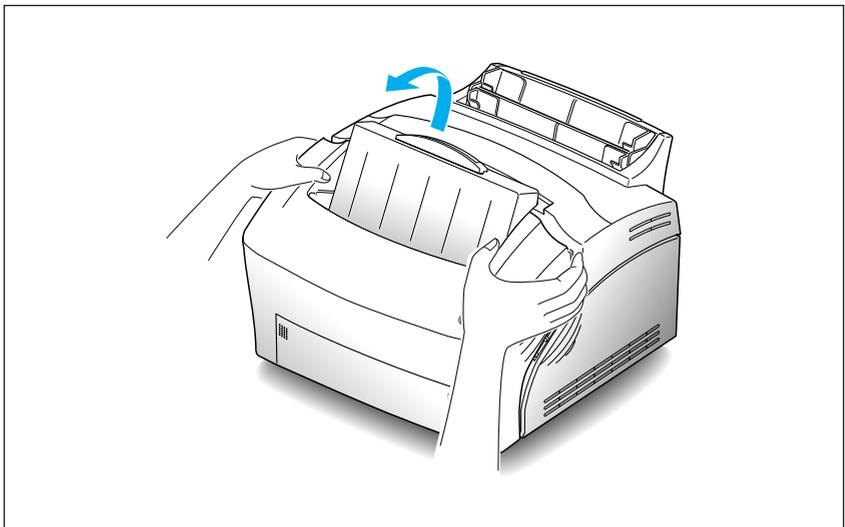
Clearing Paper Jams

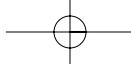
If the paper has just started to feed from the feeder when the jam occurs:

1. Pull the jammed paper back out of the feeder toward you.



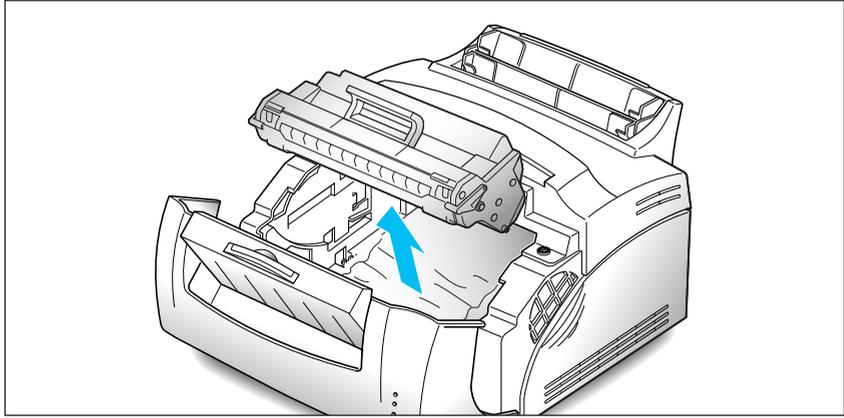
2. Open and close the cover to resume printing.



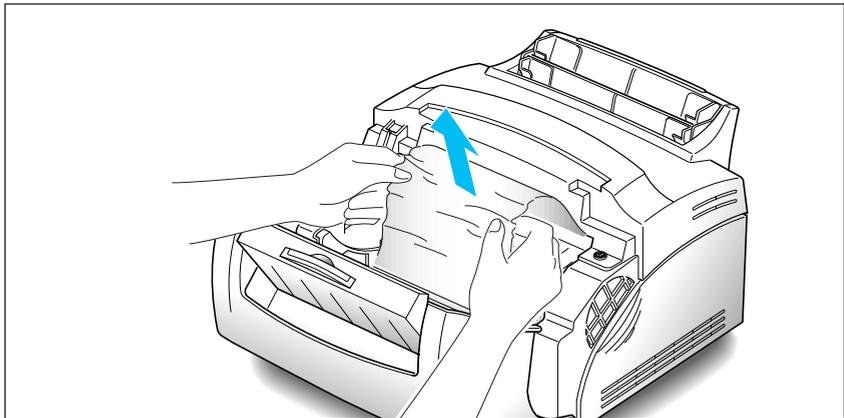


If the jam occurs inside the printer:

1. Open the cover, and remove the Toner Cartridge.

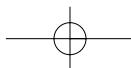


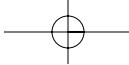
3. Grasp the paper on both sides and gently pull out toward you.



If the jam occurs near the fusing unit, do not pull the paper through the fuser or you may damage the fusing unit.

4. Check that there is no other paper in the printer.
5. Close the cover. The printer continues printing.

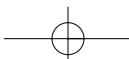


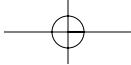


Tips for Avoiding Paper Jams

By carefully selecting print materials and loading them properly, you should be able to avoid most paper jams. If jams occur frequently, make sure you are following these tips to avoid jams.

- Follow the procedures in “Loading a Stack of Paper” on page 6 to load paper properly.
- Do not overload the paper feeder. The automatic feeder can hold up to 150 sheets and the manual feeder can hold only one sheet at a time.
- Flex, fan, and straighten the paper before loading it.
- Fan stacks of labels or transparencies before loading them into the automatic feeder. If jams do occur using the automatic feeder, try feeding one sheet at a time in the manual feeder.
- Do not load wrinkled, creased, damp, or highly curled paper.
- Do not mix paper types in the automatic feeder.
- Use only recommended print materials.
- Make sure the recommended print side is face up when loading the feeders.
- Keep print materials stored in an acceptable environment.





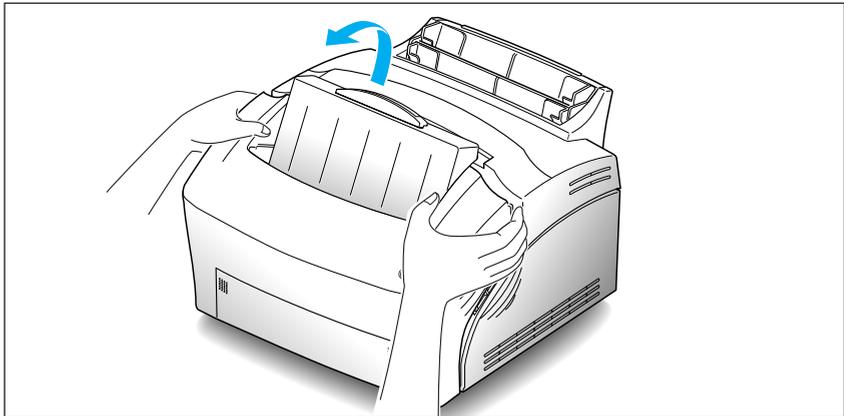
Cartridge Maintenance

To get the maximum benefit from your Toner Cartridges:

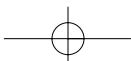
- Do not remove a Toner Cartridge from its packaging until you are ready to install it.
- Do not refill Toner Cartridge. **The printer warranty does not cover damage caused by using a refilled Cartridge.**
- Store Toner Cartridge in the same environment as the printer.
- Do not remove a Toner Cartridge from the printer except to replace it, clean it or clear a paper jam. Replace the Cartridge immediately.

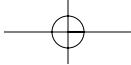
Replacing Toner Cartridge

1. Hold the printer cover using hands, and pull it toward you.

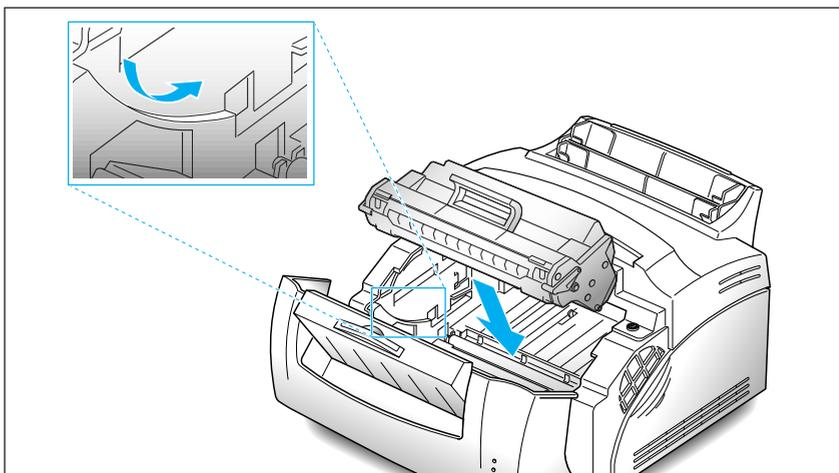


2. Lift up and pull out the old Toner Cartridge. Follow the instructions printed on the cartridge box to recycle the used Cartridge.





3. **Unpack the new Toner Cartridge, and rock it 5 or 6 times to distribute the toner.**
4. **Find the cartridge slots inside the printer, one each side.**



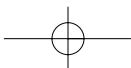
5. **Grasp the handle and slide the Cartridge down between the Toner cartridge slots. Gently push down on the Cartridge until it stops in place.**
6. **Close the printer cover.**

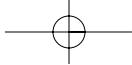
Cleaning OPC Drum

If you are getting streaks or spots on your prints, the OPC drum on your printer may need to be cleaned.

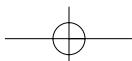
To clean the OPC drum, press and hold the operator panel button until all indicator lights come on steadily.

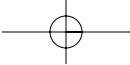
The printer starts feeding paper and prints one cleaning sheet stained with toner.





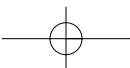
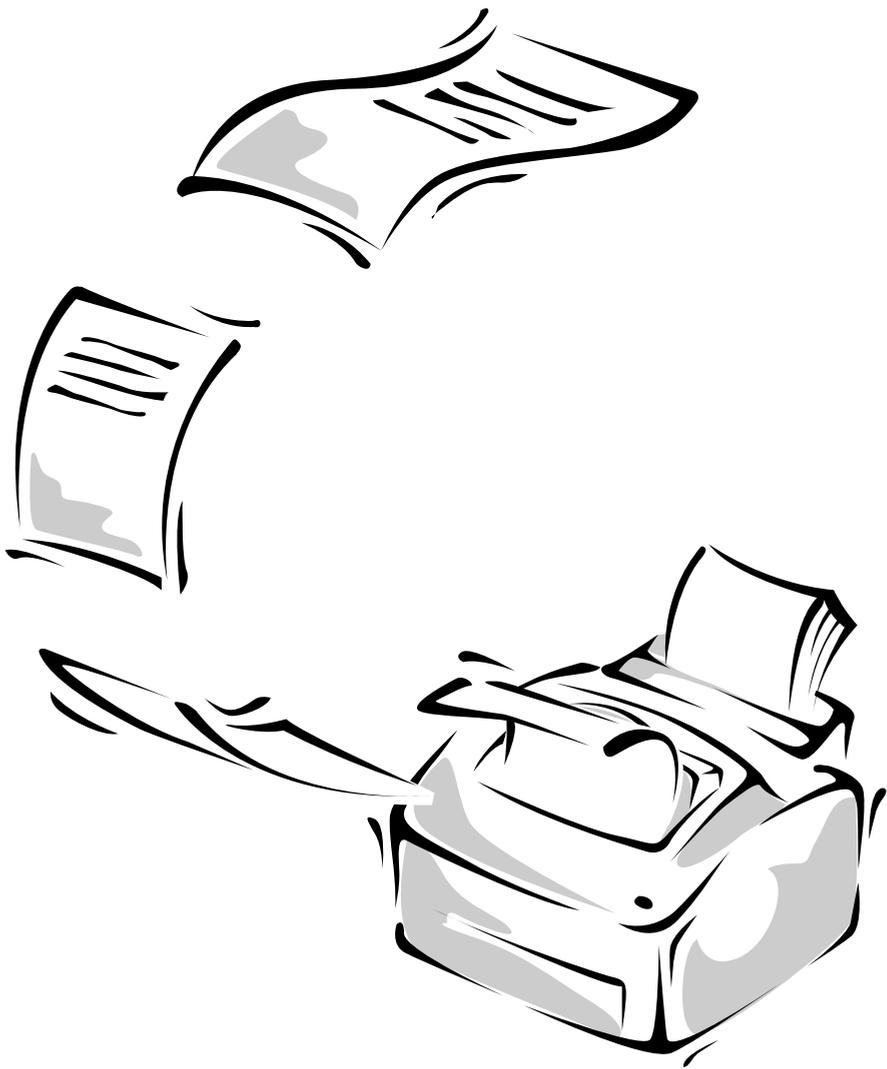
MEMO

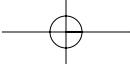




© Chapter 5

Printer Options

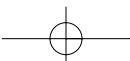
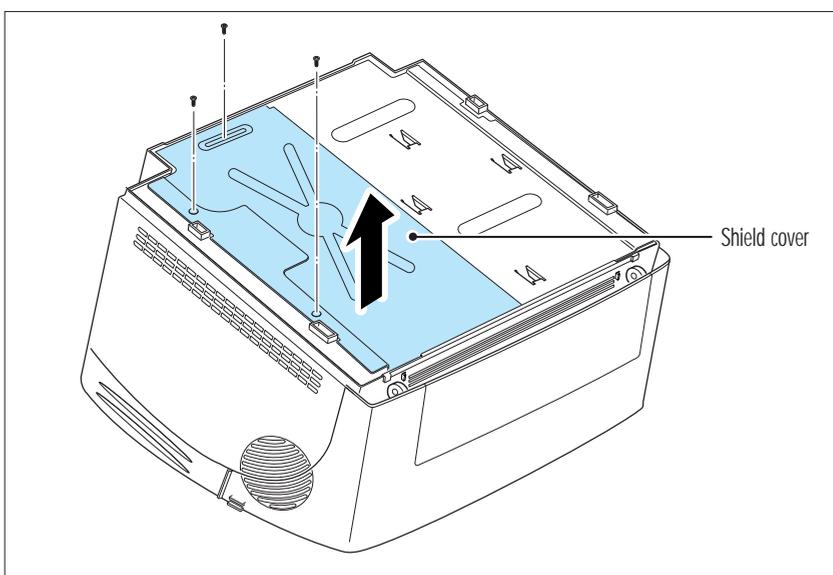


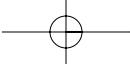


Optional Memory Card

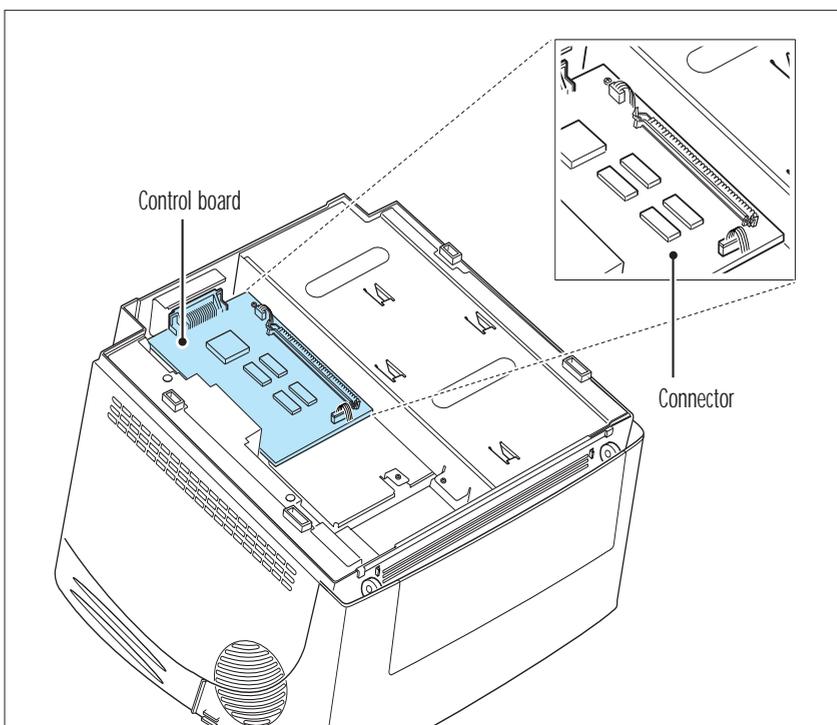
Your printer comes with 4 Mb of memory. You can install an optional memory card for a maximum of 32 Mb of printer memory.

1. Turn the printer power Off (O) and unplug the printer power cord and all cables from the back of the printer.
2. Open the front cover and remove the Toner Cartridge. Refer to 'Replacing Toner Cartridge' on page 48.
3. Push down on the feeder and stacker extenders until both are recessed into the printer body.
4. Turn the printer upside down, and remove all screws securing the shield cover, then remove it.

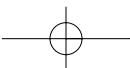
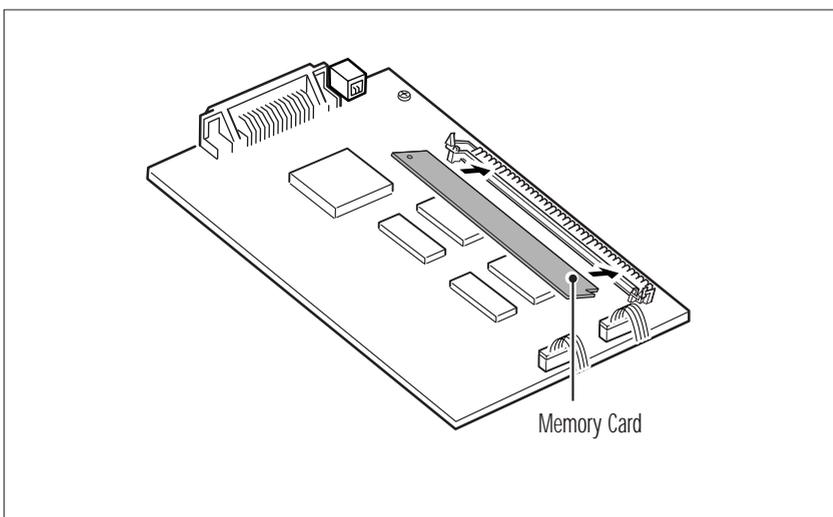


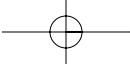


5. Locate the connector on the control board.



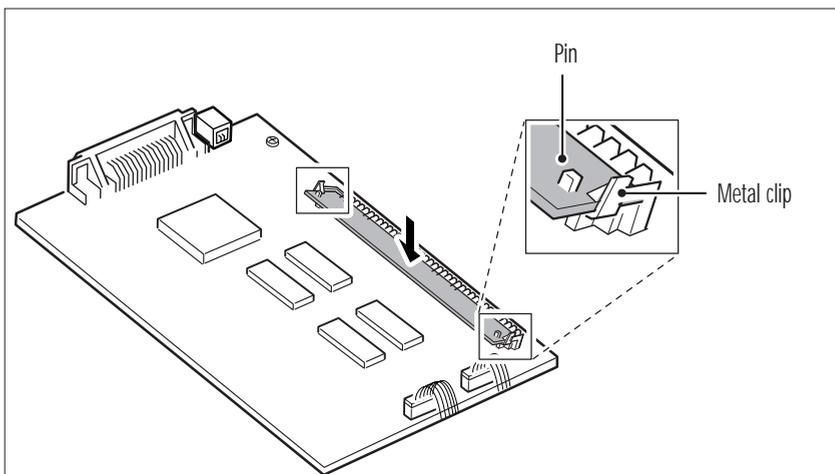
6. Hold the memory card with the connection pointing toward the control board, and insert all the way into the connector at a 30° angle .



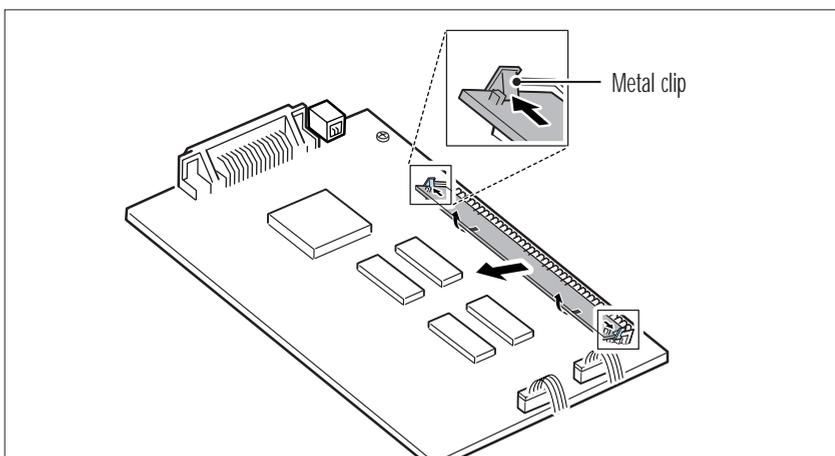


7. Push it away from you, until it snaps into place.

Make sure both metal clips on the connector are fastened and the two pins on the connector are visible through the holes on each end of the memory card. The pins should be flush with the surface of the card.

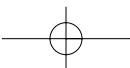


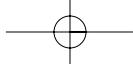
***Note:** When you disassemble the memory card, push out on the metal clips at each end of the connector, and pull it toward you.*



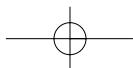
8. Reassemble the shield cover.

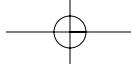
9. Turn the printer back over and replace the Toner Cartridge. Pull out the feeder and stacker extenders. Then, reconnect the printer cable and power cord and power ON the printer.





Appendix





FCC Regulations

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

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment to 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.

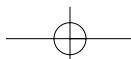
Do not make any changes or modifications to the equipment unless specified in the manual. If such changes or modifications should be made, you could be required to stop operation of the equipment.

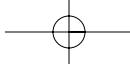
Use of shielded cable is required to comply with Class B limits in Subpart B of Part 15 of FCC Rules.

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", NMB-003 édictée par l'Industrie et Sciences Canada.





EC Declaration of Conformity

We,

SAMSUNG ELECTRONICS CO.,LTD
#259, Gong Dan-Dong, Gumi-City, Kyung Buk, Korea

declare sole responsibility that the

ML-5100A Laser printer

meets the intent of Directive 89/336/EEC for Electromagnetic Compatibility and Low Voltage Directive 73/23/EEC.

Compliance was demonstrated to the following specifications as listed in the official journal of the European Communities:

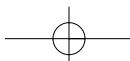
EN 50081-Emissions:

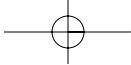
EN 55022 Radiated, Class B
EN 55022 Conducted, Class B
EN 60555-2 Power Harmonics

EN 50082-Immunity:

IEC 801-2 Electrostatic Discharge
IEC 801-3 RF Radiated
IEC 801-4 Fast Transient/Burst

EN 60950-Safety





Laser Safety Statement

The printer is certified in the U.S. to conform to the requirements of DHHS 21 CFR 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 the Laser/Scanner assembly. The reflected beam, although invisible, can damage your eyes.



CAUTION -INVISIBLE LASER RADIATION WHEN THIS COVER IS OPEN.
DO NOT OPEN THIS COVER

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

ATTENTION -RAYONNEMENT LASER INVISIBLE EN CAS D'OVERTURE.
DANGEREUSE AU FAISCEAU.

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

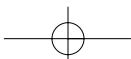
PRECAUCION -RADIACION LASER IVISIBLE CUANDO SE ABRE. EVITAR EXPONERSE AL
RAYO.

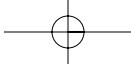
ADVARSEL -USYNLIG LASERSTRÅLNING VED ÅBNING NÅR SIKKERHEDSBRYDERE ER
UDE AF FUNKTION UNDGÅ UDSAETTELSE FOR STRÅLNING.

ADVARSER -USYNLIG LASERSTRÅLNING NÅR DEKSEL ÅPNES. STIRR IKKE INN I
STRÅLEN. UNNGÅ EKSPONERING FOR STRÅLEN.

VARNING -OSYNLIG LASERSTRÅLNING NÅR DENNA DEL ÄR ÖPPAND OCH SPÄRREN
ÄR URKOPPLAD. BETRAKTA EJ STRÅLEN STRÅLEN ÄR FARLIG.

VARO -AVATTAESSA JA SUOJALUKITUS OHITETTAESSA OLET ALTTIINA
NÄKYMÄTTÖMÄLLE LASERSÄTEILYLLE ÄLÄ KATSO SÄTEESEEN.





Laser product labels are located above the print cartridge.

CLASS 1 LASER PRODUCT
LASER KLASSE 1
LUOKAN 1 LASERLAITE
APPAREL À LASER DE CLASSE 1
TO IEC 825

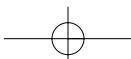
Safety Information

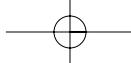
PRODUCT SAFETY

USA	UL 1950 (UL LISTING)
CANADA	CSA C22.2 No. 950 & UL 1950 (CSA Certification)
EEC (Europe)	IEC 60950/EN 60950 (TÜV GS Certification)
CB	IEC 60950

LASER SAFETY

EEC (Europe)	HD 194. & EN 60825
USA	21 CFR, Chapter 1, Subchapter J (CDRH Certified)





Specifications

Item		Description	Remarks
Engine	Speed	8 PPM	
	Resolution	600 DPI	
	Developing method/Toner	Eletrophotography Non-mag monocomponent	
	Warm up time	Less than 30 sec.	at normal condition
	First print time	Less than 19 sec.	from idle mode
	Duty cycle	Maximum 6,000 pages per month	
	Size (w x d x h)	13.6 x 14.4 x 8.8 in (345 x 365 x 224 mm)	
	Weight	Less than 16.5 lb (7.5 Kg)	
	Power consumption	Printing: 200W avg./450 W max. Sleep mode: Less than 25 W	USA: 100~127 VAC, 47~63 Hz EUROPE: 220~240 VAC, 47~63 Hz
	Noise level	Printing: <48 dBA	ISO 7779
Sleep mode: Background noise			
Paper Handling	Input capacity	150 sheets (automatic feeder) 1 sheet (manual feeder)	Multi-Page Feeding
	Output capacity	100 sheets in face-down stacker 1 sheet in face-up stacker	
	Paper size	A4, Letter, Legal, Executive, B5 COM-10, Monarch, DL, C5, C6, A5, Custom paper size	
Toner Cartridge	Type	Cartridge	
	Life time	5,000 pages at 5 % density	
	Charging/Transfer	Contact roller Charging & Transfer	
	Econo mode	Yes	
Controller	CPU	32 bit RISC CPU 33 MHz	By Controller
	Emulation	PCL5e,PCL6	
	Memory	4 Mb Standard	
		Max up to 32 Mb	
Interface	IEEE1284 B type 1,USB		

