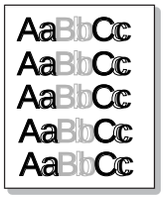
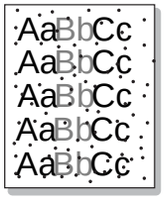
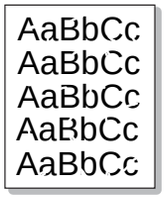
Condition	Possible cause	Suggested solutions
The printer does not print. (Continued)	The printer may be configured incorrectly.	Check the printer properties to ensure that all of the print settings are correct.
	The printer driver may be incorrectly installed.	Reinstall the printer driver; See the **Software 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-3050 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
Light or faded print 	If a vertical white streak or faded area appears on the page: • 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.
Toner spots 	• 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.
Dropouts 	If generally rounded, faded areas occur randomly on the page: • 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	If black vertical streaks appear on the page: • The drum inside the toner cartridge has probably been scratched. Install a new toner cartridge.
Gray background	If the amount of background shading becomes unacceptable, the procedures below may fix the problem. • 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	• 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	If marks repeatedly appear on the printed side of the page at even intervals: • 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	Background scatter results from bits of toner distributed on the printed page. • 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	• 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	• 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	• 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	• 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	• 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	• 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	• 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	Character voids are white areas within characters that should be solid black: • 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	If horizontally aligned black streaks or smears appear: • 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	If the printed paper is curled or paper does not feed into the printer: • 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.	• 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.	• 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 consists, 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
The print doesn’t print.	• Check if the printer driver is installed in your system. Open Unified Driver Configurator and switch to the Printers tab in Printers configuration window to look at the list of available printers. Make sure that your machine is displayed on the list. If not, please, invoke Add new printer wizard to set up your device. • Check if the printer is started. Open Printers configuration and select your machine on the printers list. Look at the description in the Selected printer pane. If its status contains “(stopped)” string, please, press the **Start** button. After that normal operation of the printer should be restored. The "stopped" status might be activated when some problems in printing occurred. For instance, this could be an attempt to print document when MFP port is claimed by a scanning application. • Check if the port is not busy. Since functional components of MFP (printer and scanner) share the same I/O interface (MFP port), the situation of simultaneous access of different “consumer” application to the same MFP port is possible. To avoid possible conflicts, only one of them at a time is allowed to gain control over the device. The other “consumer” will encounter “device busy” response. You should open port configuration and select the port assigned to your printer. In the Selected port pane you can see if the port is occupied by some other application. If this is the case, you should wait for completion of the current job or should press Release port button, if you are sure that the present owner is not functioning properly. Check if your application has special print option such as “-oraw”. If “-oraw” is specified in the command line parameter then remove it to print properly. For Gimp front-end, select “print” -> “Setup printer” and edit command line parameter in the command item.

Condition	Suggested solutions
The printer does not appear on the scanners list.	• Check if your machine is attached to your computer. Make sure that it is connected properly via the USB port and is turned on. • Check if the scanner driver for you machine is installed in your system. Open Unified Driver Configurator, switch to Scanners configuration, then press **Drivers**. Make sure that driver with a name corresponding to your machine's name is listed in the window. • Check if the port is not busy. Since functional components of MFP (printer and scanner) share the same I/O interface (MFP port), the situation of simultaneous access of different “consumer” application to the same MFP port is possible. To avoid possible conflicts, only one of them at a time is allowed to gain control over the device. The other “consumer” will encounter “device busy” response. This can usually happen while starting scan procedure, and appropriate message box displays. To identify the source of the problem, you should open port configuration and select the port assigned to your scanner. MFP port's symbol /dev/mfp0 corresponds to LP:0 designation displayed in the scanners’ options, /dev/mfp1 relates to LP:1 and so on. USB ports start at /dev/mfp4, so scanner on USB:0 relates to /dev/mfp4 respectively and so forth sequentially. In the Selected port pane you can see if the port is occupied by some other application. If this is the case, you should wait for completion of the current job or should press Release port button, if you are sure that the present port's owner is not functioning properly.

Condition	Suggested solutions
The printer doesn’t scan.	• Check if a document is loaded into the machine. • Check if your machine is connected to the computer. Make sure if it is connected properly if I/O error is reported while scanning. • Check if port is not busy. Since functional components of MFP (printer and scanner) share the same I/O interface (MFP port), the situation of simultaneous access of different “consumer” application to the same MFP port is possible. To avoid possible conflicts, only one of them at a time is allowed to gain control over the device. The other “consumer” will encounter “device busy” response. This can usually happen while starting scan procedure, and appropriate message box will be displayed. To identify the source of the problem, you should open port configuration and select the port assigned to your scanner. MFP port’s symbol /dev/mfp0 corresponds to LP:0 designation displayed in the scanners’ options, /dev/mfp1 relates to LP:1 and so on. USB ports start at /dev/mfp4, so scanner on USB:0 relates to /dev/mfp4 respectively and so forth sequentially. In the Selected port pane you can see if the port is occupied by some other application. If this is the case, you should wait for completion of the current job or should press Release port button, if you are sure that the present port’s owner is not functioning properly.
Can’t scan via Gimp Front-end.	• Check if Gimp Front-end has “Xsane:Device dialog..” on the “Acquire” menu. If not, you should install Xsane plug-in for Gimp on the your computer. You can find Xsane plug-in package for Gimp on Linux distribution CD or Gimp home page. For the detail information, refer to the Help for Linux distribution CD or Gimp Front-end application. If you wish to use other kind of scan application, refer to the Help for application.

Condition	Suggested solutions
I encounter error “Unable to open MFP port device file!” when printing a document.	Please avoid changing print job parameters (via LPR GUI, for example) while a print job is in progress. Known versions of CUPS server break the print job whenever print options are changed and then try to restart the job from the beginning. Since Unified Linux Driver locks MFP port while printing, the abrupt termination of the driver keeps the port locked and therefore unavailable for subsequent print jobs. If this situation occurred, please, try to release the MFP port.

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

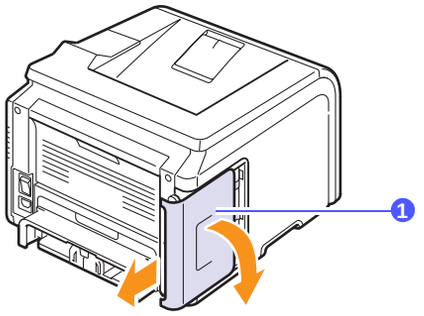
Your printer has a dual in-line memory module (DIMM) slot. Use this DIMM slot to install additional memory.

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.

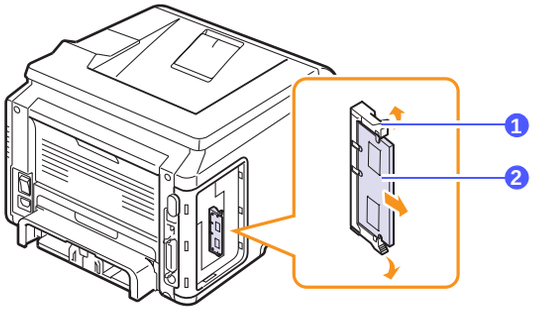
1 Turn the printer power off and unplug all cables from the printer.

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



1	control board cover

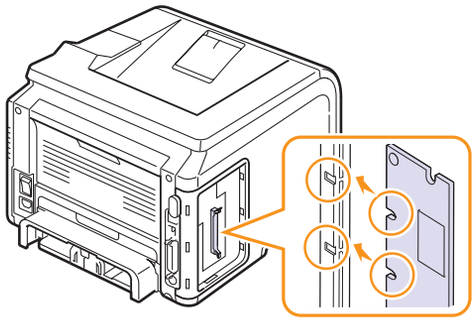
3 Completely open the latch on each side of the DIMM slot. Remove the preinstalled memory DIMM.



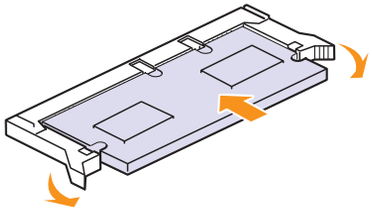
1	latch
2	memory DIMM

4 Take out a new memory DIMM from the plastic bag.

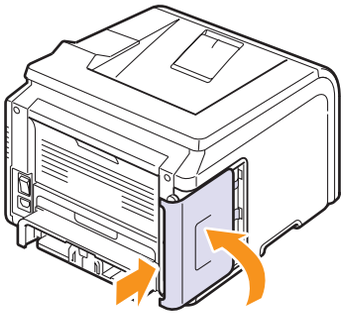
5 Holding the memory DIMM by the edges, align the notches on the memory DIMM with the grooves on the memory DIMM slot.



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-3050 Series PS** 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:NMOption** → **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

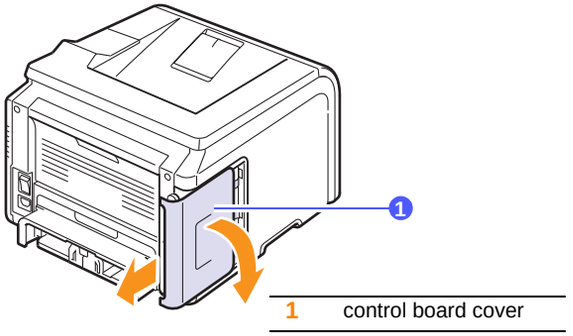
To use the ML-3050 in network environments, you need to buy an optional wired or wireless network printer server. For information about installing the network printer server, see the network printer server user's guide.

For order information, see page 7.1.

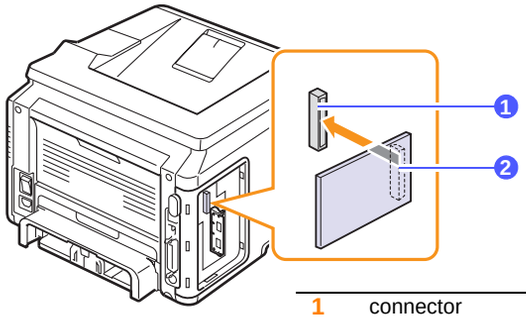
Review the precautions on page 10.1 and then follow this procedure to install the wireless network interface card in your printer.

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.

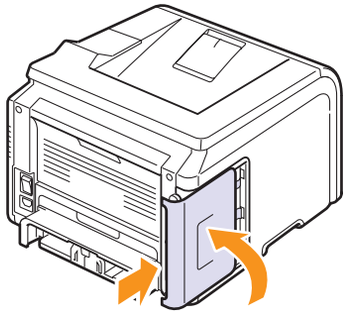


3 Align the connector on the wireless network interface card with the connector on the control board. Push the card firmly into the connector on the control board until it is completely and securely in place.



1	connector
2	wireless network interface card

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.

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.

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

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	
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 20 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: 520 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]	• Starter toner cartridge: 4,000 pages • Standard: 4,000 pages • High yield: 8,000 pages (at ISO 19752 5% coverage)	
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 (Max 288 MB)
	ML-3051N, ML-3051ND	64 MB (Max 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	• IEEE 1284 Bidirectional Parallel Standard - Modes supported: Compatible, Nibble, Byte, ECP • USB Interface Standard - USB 2.0 compliant - 480 Mbps 1 port • Network Interface ML-3050: External ethernet 10/100 Base TX printer server, External ethernet 10/100 Base TX + 802.11b wireless printer server ML-3051N, ML-3051ND: 802.11b/g wireless LAN	
OS compatibility[e]	• 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, External ethernet 10/100 Base TX, External ethernet 10/100 Base TX + 802.11b wireless printer server
	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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Samsung Printer

Software section

SOFTWARE SECTION

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1 Installing Printer Software in Windows

This chapter includes:

- **Installing Printer Software**
- **Changing the Software Language**
- **Reinstalling Printer Software**
- **Removing Printer Software**

Installing Printer Software

You can install the printer software for local printing or network printing. To install the printer software on the computer, perform the appropriate installation procedure depending on the printer in use.

A printer driver is software that lets your computer communicate with your printer. The procedure to install drivers may differ depending on the operating system you are using.

All applications should be closed on your PC before beginning installation.

Installing Software for Local Printing

A local printer is a printer directly attached to your computer using the printer cable supplied with your printer, such as a USB or parallel cable. If your printer is attached to a network, skip this step and go to "Installing Software for Network Printing" on page 7.

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

NOTE: If the "New Hardware Wizard" window appears during the installation procedure, click ☒ in the upper right corner of the box to close the window, or click **Cancel**.

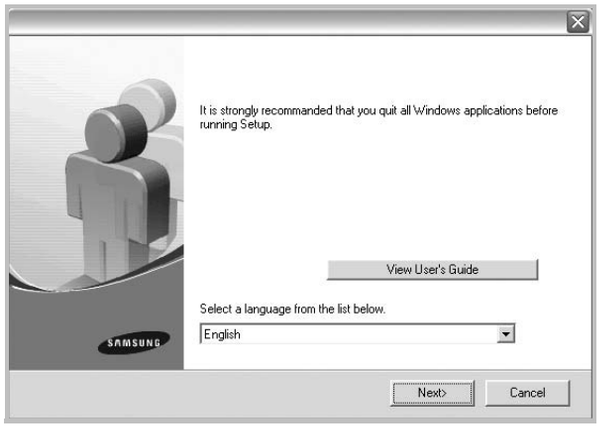
Typical Installation

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

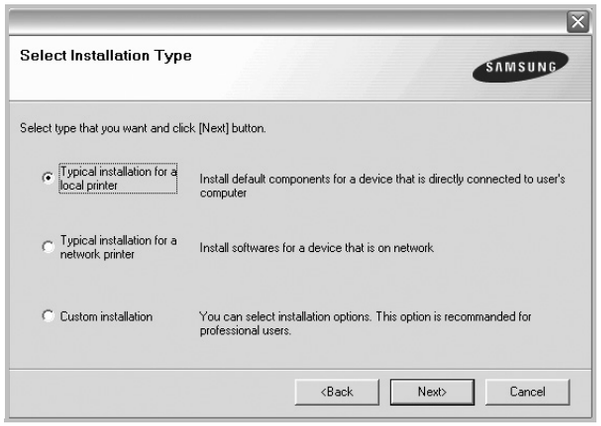
1. Make sure that the printer is connected to your computer and powered on.
2. Insert the supplied CD-ROM into your CD-ROM drive.

   The CD-ROM should automatically run, and an installation window appears.

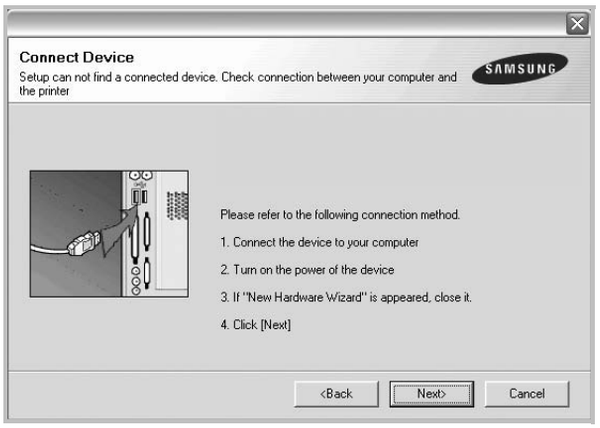
   If the installation window does not appear, click **Start** and then **Run**. Type **X:\Setup.exe**, replacing "**X**" with the letter which represents your drive and click **OK**.



3. Click **Next**.
   - If necessary, select a language from the drop-down list.
   - **View User's Guide**: Allows you to view the User's Guide. If your computer doesn't have Adobe Acrobat, click on this option and it will automatically install Adobe Acrobat Reader for you.
4. Select **Typical installation for a local printer**. Click **Next**.



NOTE: If your printer is not already connected to the computer, the following window will appear.



- After connecting the printer, click **Next**.
- If you don't want to connect the printer at this time, click **Next**, and **No** on the following screen. Then the installation will start and a test page will not be printed at the end of the installation.
- ***The installation window that appears in this User's Guide may differ depending on the printer and interface in use.***

5 After the installation is finished, a window asking you to print a test page appears. If you choose to print a test page, select the checkbox and click **Next**.

Otherwise, just click **Next** and skip to step 7.

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

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

7 To register yourself as a user of Samsung Printers in order to receive information from Samsung, select the checkbox and click **Finish**. You are now sent to the Samsung web site.

Otherwise, just click **Finish**.

NOTE: After setup is complete, if your printer driver doesn't work properly, reinstall the printer driver. See "Reinstalling Printer Software" on page 10.

Custom Installation

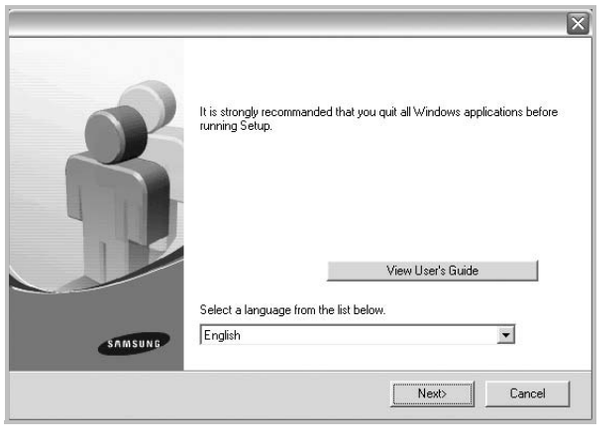
You can choose individual components to install.

1 Make sure that the printer is connected to your computer and powered on.

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

The CD-ROM should automatically run, and an installation window appears.

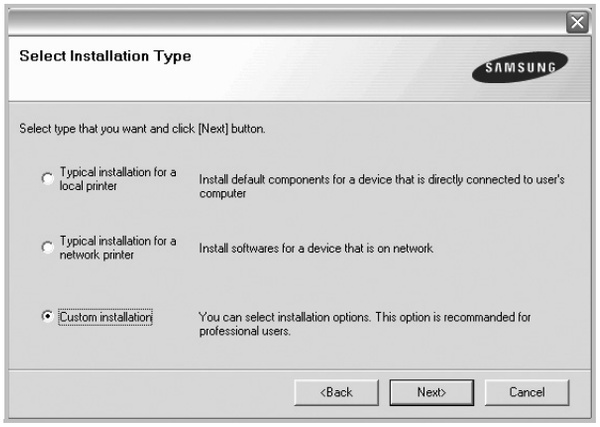
If the installation window does not appear, click **Start** and then **Run**. Type **X:\Setup.exe**, replacing "**X**" with the letter which represents your drive and click **OK**.



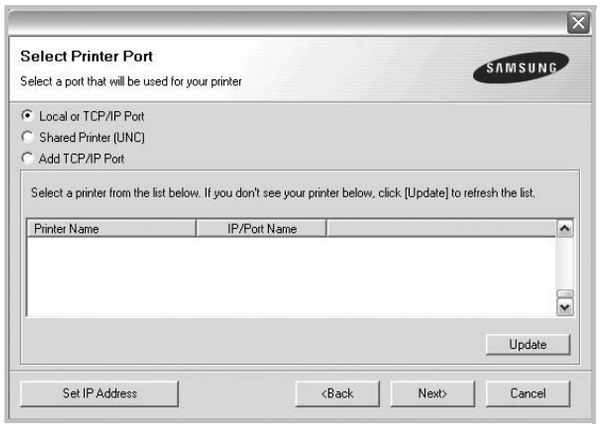
3 Click **Next**.

- If necessary, select a language from the drop-down list.
- **View User's Guide**: Allows you to view the User's Guide. If your computer doesn't have Adobe Acrobat, click on this option and it will automatically install Adobe Acrobat Reader for you.

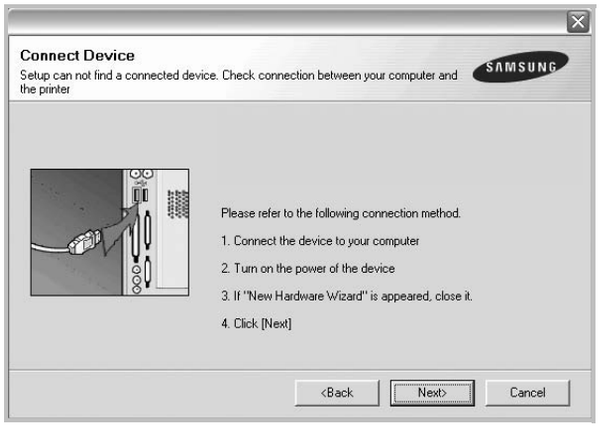
4 Select **Custom installation**. Click **Next**.



5 Select your printer and click **Next**.

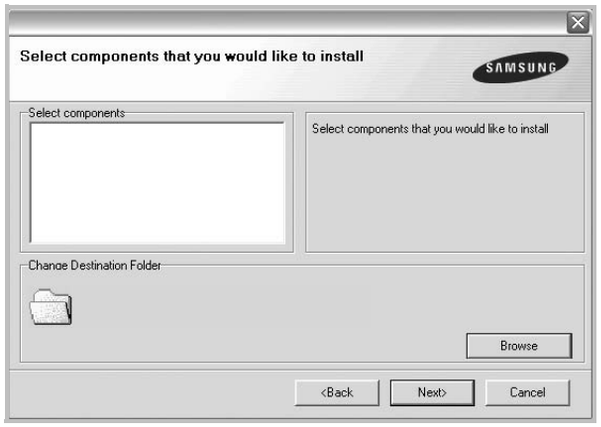


NOTE: If your printer is not already connected to the computer, the following window will appear.



- After connecting the printer, click **Next**.
- If you don't want to connect the printer at this time, click **Next**, and **No** on the following screen. Then the installation will start and a test page will not be printed at the end of the installation.
- ***The installation window that appears in this User's Guide may differ depending on the printer and interface in use.***

6 Select the components to be installed and click **Next**.



7 After the installation is finished, a window asking you to print a test page appears. If you choose to print a test page, select the checkbox and click **Next**.

Otherwise, just click **Next** and skip to step 9.

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

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

9 To register yourself as a user of Samsung Printers in order to receive information from Samsung, select the checkbox and click **Finish**. You are now sent to the Samsung web site.

Otherwise, just click **Finish**.

Installing Software for Network Printing

When you connect your printer to a network, you must first configure the TCP/IP settings for the printer. After you have assigned and verified the TCP/IP settings, you are ready to install the software on each computer on the network.

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

Typical Installation

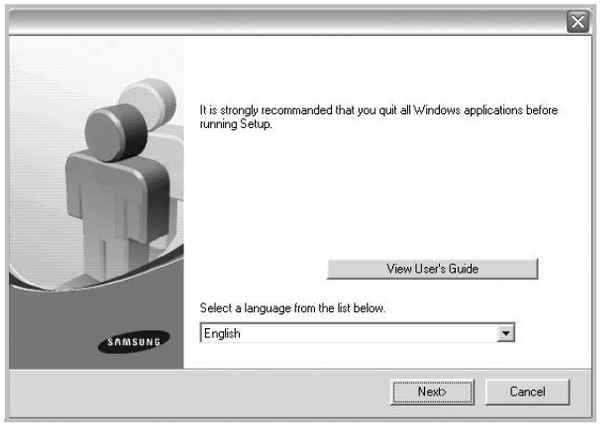
This is recommended for most users. All components necessary for printer operations will be installed.

1 Make sure that the printer is connected to your network and powered on. For details about connecting to the network, see the supplied printer's User's Guide.

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

The CD-ROM should automatically run, and an installation window appears.

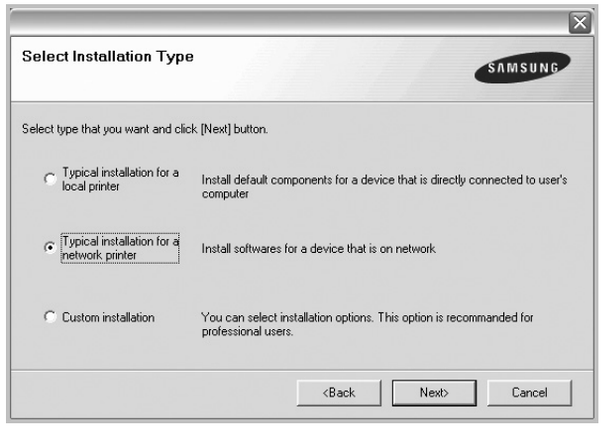
If the installation window does not appear, click **Start** and then **Run**. Type **X:\Setup.exe**, replacing "**X**" with the letter which represents your drive and click **OK**.



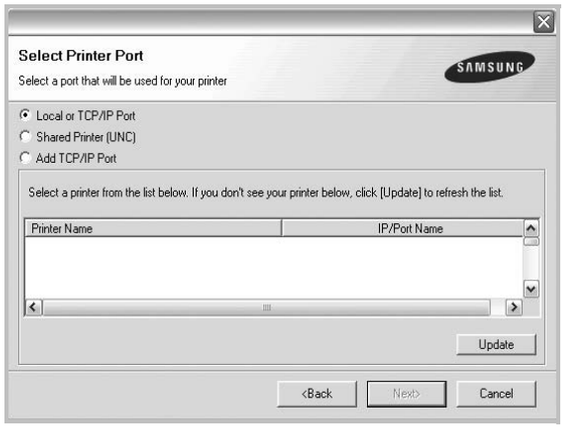
3 Click **Next**.

- If necessary, select a language from the drop-down list.
- **View User's Guide**: Allows you to view the User's Guide. If your computer doesn't have Adobe Acrobat, click on this option and it will automatically install Adobe Acrobat Reader for you.

4 Select **Typical installation for a network printer**. Click **Next**.



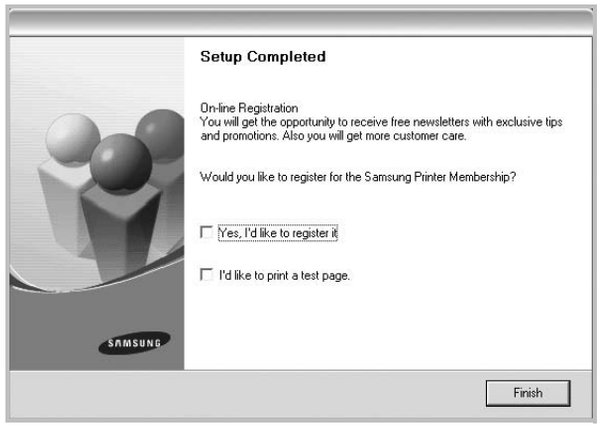
5 The list of printers available on the network appears. Select the printer you want to install from the list and then click **Next**.



- If you do not see your printer on the list, click **Update** to refresh the list, or select **Add TCP/IP Port** to add your printer to the network. To add the printer to the network, enter the port name and the IP address for the printer.
- To find a shared network printer (UNC Path), select **Shared Printer [UNC]** and enter the shared name manually or find a shared printer by clicking the **Browse** button.

6 After the installation is finished, a window appears asking you to print a test page and to register yourself as a user of Samsung Printers in order to receive information from Samsung. If you so desire, select the corresponding checkbox(es) and click **Finish**.

Otherwise, just click **Finish**.



NOTE: After setup is complete, if your printer driver doesn't work properly, reinstall the printer driver. See "Reinstalling Printer Software" on page 10.

Custom Installation

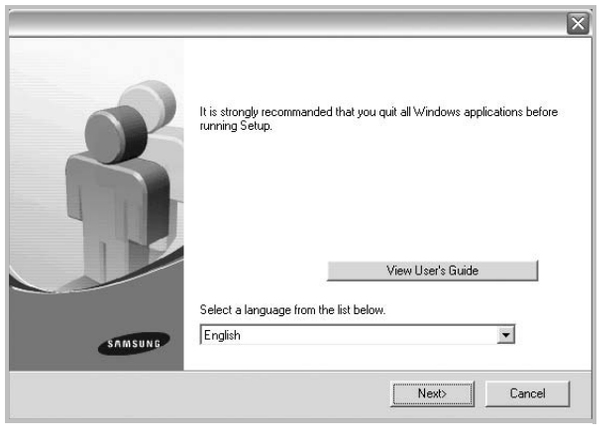
You can choose individual components to install and set a specific IP address.

1 Make sure that the printer is connected to your network and powered on. For details about connecting to the network, see the supplied printer's User's Guide.

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

The CD-ROM should automatically run, and an installation window appears.

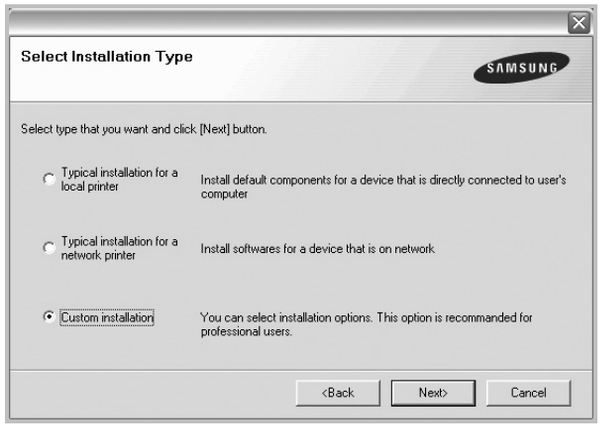
If the installation window does not appear, click **Start** and then **Run**. Type **X:\Setup.exe**, replacing "**X**" with the letter which represents your drive and click **OK**.



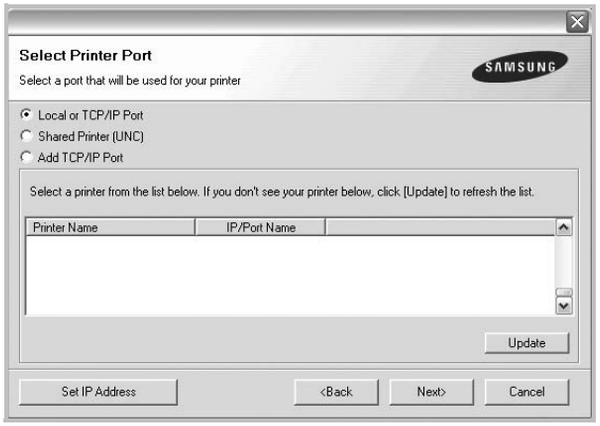
3 Click **Next**.

- If necessary, select a language from the drop-down list.
- **View User's Guide**: Allows you to view the User's Guide. If your computer doesn't have Adobe Acrobat, click on this option and it will automatically install Adobe Acrobat Reader for you.

4 Select **Custom installation**. Click **Next**.

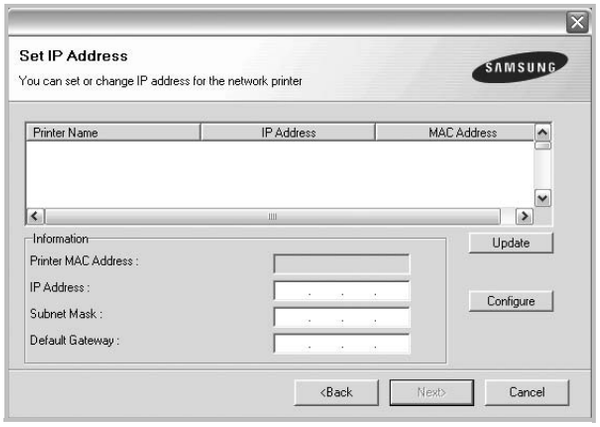


5 The list of printers available on the network appears. Select the printer you want to install from the list and then click **Next**.



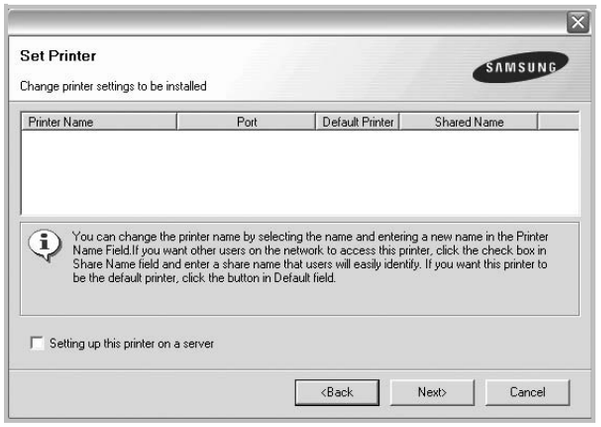
- If you do not see your printer on the list, click **Update** to refresh the list, or select **Add TCP/IP Port** to add your printer to the network. To add the printer to the network, enter the port name and the IP address for the printer.
- To find a shared network printer (UNC Path), select **Shared Printer [UNC]** and enter the shared name manually or find a shared printer by clicking the **Browse** button.

TIP: If you want to set a specific IP address on a specific network printer, click the **Set IP Address** button. The Set IP Address window appears. Do as follows:



a. Select a printer to be set with a specific IP address from the list.
b. Configure an IP address, subnet mask, and gateway for the printer manually and click **Configure** to set the specific IP address for the network printer.
c. Click **Next**.

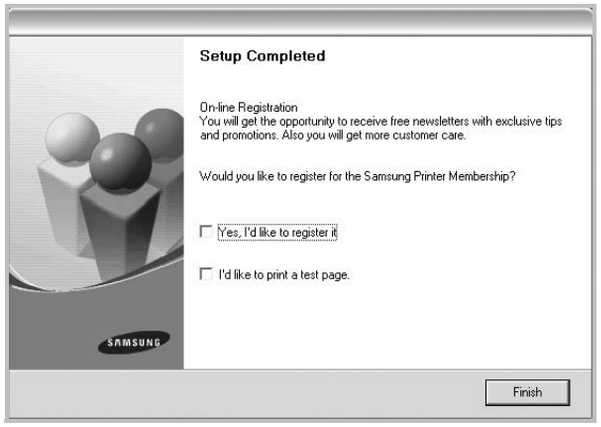
6 Select the components to be installed. After selecting the components, the following window appears. You can also change the printer name, set the printer to be shared on the network, set the printer as the default printer, and change the port name of each printer. Click **Next**.



To install this software on a server, select the **Setting up this printer on a server** checkbox.

7 After the installation is finished, a window appears asking you to print a test page and to register yourself as a user of Samsung Printers in order to receive information from Samsung. If you so desire, select the corresponding checkbox(es) and click **Finish**.

Otherwise, just click **Finish**.



NOTE: After setup is complete, if your printer driver doesn't work properly, reinstall the printer driver. See “Reinstalling Printer Software” on page 10.

Changing the Software Language

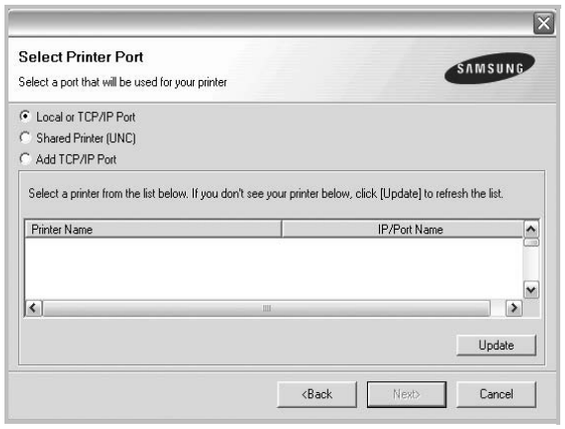
After installation of the software, you can change the display language.

1 Click the Windows **Start** menu.
2 Select **Programs** or **All Programs** and then **your printer driver name**.
3 Select **Language Selection**.
4 Select the desired language from the language selection window, and click **OK**.

Reinstalling Printer Software

You can reinstall the software if installation fails.

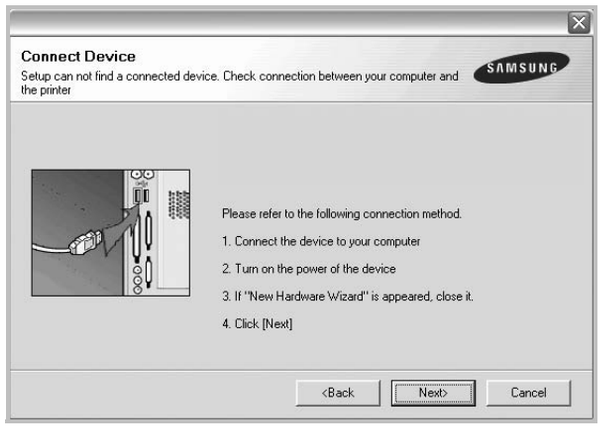
1 Start Windows.
2 From the **Start** menu select **Programs** or **All Programs** → **your printer driver name** → **Maintenance**.
3 Select **Repair** and click **Next**.
4 The list of printers available on the network appears. Select the printer you want to install from the list and then click **Next**.



- If you do not see your printer on the list, click **Update** to refresh the list, or select **Add TCP/IP Port** to add your printer to the network. To add the printer to the network, enter the port name and the IP address for the printer.
- To find a shared network printer (UNC Path), select **Shared Printer [UNC]** and enter the shared name manually or find a shared printer by clicking the **Browse** button.

You will see a component list so that you can reinstall any item individually.

NOTE: If your printer is not already connected to the computer, the following window will appear.



- After connecting the printer, click **Next**.
- If you don't want to connect the printer at this time, click **Next**, and **No** on the following screen. Then the installation will start and a test page will not be printed at the end of the installation.
- ***The reinstallation window that appears in this User's Guide may differ depending on the printer and interface in use.***

5 Select the components you want to reinstall and click **Next**.

If you installed the printer software for local printing and you select **your printer driver name**, the window asking you to print a test page appears. Do as follows:

a. To print a test page, select the check box and click **Next**.

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

If it doesn't, click **No** to reprint it.

6 When the reinstallation is done, click **Finish**.

Removing Printer Software

1. Start Windows.
2. From the **Start** menu select **Programs** or **All Programs** → **your printer driver name** → **Maintenance**.
3. Select **Remove** and click **Next**.

   You will see a component list so that you can remove any item individually.
4. Select the components you want to remove and then click **Next**.
5. When your computer asks you to confirm your selection, click **Yes**.

   The selected driver and all of its components are removed from your computer.
6. After the software is removed, click **Finish**.

2 Basic Printing

This chapter explains the printing options and common printing tasks in Windows.

This chapter includes:

- **Printing a Document**
- **Printer Settings**
  - **Layout Tab**
  - **Paper Tab**
  - **Graphics Tab**
  - **Extras Tab**
  - **About Tab**
  - **Printer Tab**
  - **Using a Favorite Setting**
  - **Using Help**

Printing a Document

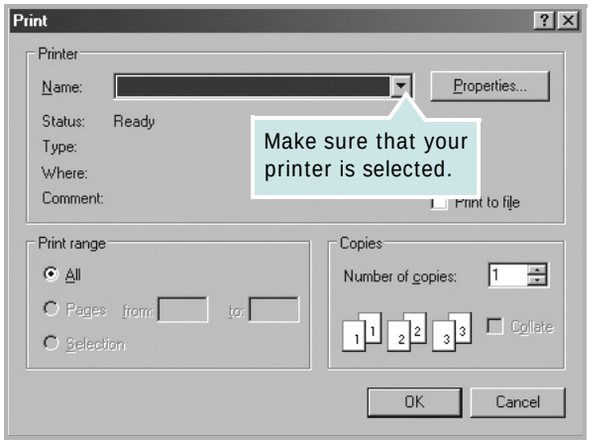
NOTE:

- Your printer driver **Properties** window that appears in this User's Guide may differ depending on the printer in use. However the composition of the printer properties window is similar.
- ***Check the Operating System(s) that are compatible with your printer. Please refer to the OS Compatibility section of Printer Specifications in your Printer User's Guide.***
- If you need to know the exact name of your printer, you can check the supplied CD-ROM.

The following 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 program you are using. Refer to the User's Guide of your software application for the exact printing procedure.

1. Open the document you want to print.
2. Select **Print** from the **File** menu. The Print window is displayed. It may look slightly different depending on your application.

   The basic print settings are selected within the Print window. These settings include the number of copies and print range.



3. Select **your printer driver** from the **Name** drop-down list.
4. To take advantage of the printer features provided by your printer driver, click **Properties** or **Preferences** in the application's Print window. For details, see "Printer Settings" on page 13.

   If you see **Setup**, **Printer**, or **Options** in your Print window, click it instead. Then click **Properties** on the next screen.
5. Click **OK** to close the printer properties window.
6. To start the print job, click **OK** or **Print** in the Print window.

Printer Settings

You can use the printer properties window, which allows you to access all of the printer options you need when using your printer. When the printer properties are displayed, you can review and change the settings needed for your print job.

Your printer properties window may differ, depending on your operating system. This Software User's Guide shows the Properties window for Windows 98.

Your printer driver **Properties** window that appears in this User's Guide may differ depending on the printer in use.

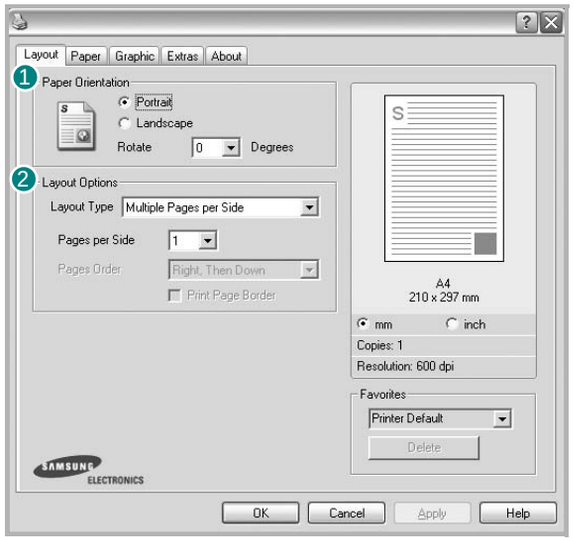
If you access printer properties through the Printers folder, you can view additional Windows-based tabs (refer to your Windows User's Guide) and the Printer tab (see "Printer Tab" on page 16).

NOTES:

- Most Windows applications will override settings you specify in the printer driver. Change all print settings available in the software application first, and change any remaining settings using the printer driver.
- The settings you change remain in effect only while you are using the current program. **To make your changes permanent**, make them in the Printers folder.
- The following procedure is for Windows XP. For other Windows OS, refer to the corresponding Windows User's Guide or online help.
  1. Click the Windows **Start** button.
  2. Select **Printers and Faxes**.
  3. Select **your printer driver icon**.
  4. Right-click on the printer driver icon and select **Printing Preferences**.
  5. Change the settings on each tab, click OK.

Layout Tab

The **Layout** tab provides options to adjust how the document appears on the printed page. The **Layout Options** includes **Multiple Pages per Side** and **Poster Printing**. See "Printing a Document" on page 12 for more information on accessing printer properties.



❶ Paper Orientation

Paper Orientation allows you to select the direction in which information is printed on a page.

- **Portrait** prints across the width of the page, letter style.
- **Landscape** prints across the length of the page, spreadsheet style.
- **Rotate** allows you to rotate the page the selected degrees.

▲ Portrait

▲ Landscape

❷ Layout Options

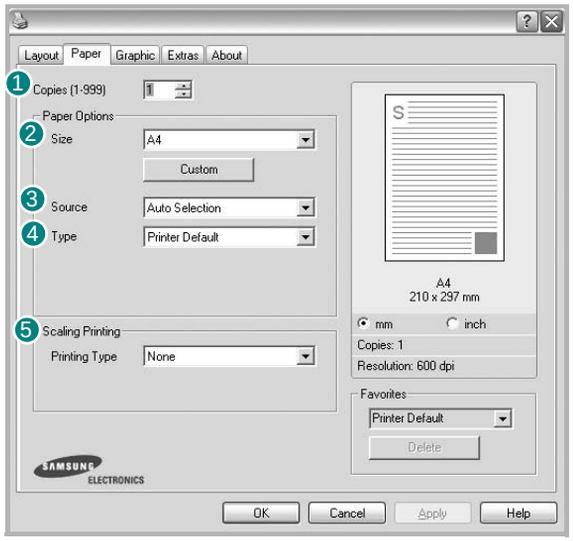
Layout Options allows you to select advanced printing options. You can choose **Multiple Pages per Side** and **Poster Printing**.

- For details, see "Printing Multiple Pages on One Sheet of Paper (N-Up Printing)" on page 18.
- For details, see "Printing Posters" on page 19

Paper Tab

Use the following options to set the basic paper handling specifications when you access the printer properties. See “Printing a Document” on page 12 for more information on accessing printer properties.

Click the **Paper** tab to access various paper properties.



❶ Copies

Copies allows you to choose the number of copies to be printed. You can select 1 to 999 copies.

❷ Size

Size allows you to set the size of paper you loaded in the tray. If the required size is not listed in the **Size** box, click **Custom**. When the **Custom Paper Setting** window appears, set the paper size and click **OK**. The setting appears in the list so that you can select it.

❸ Source

Make sure that **Source** is set to the corresponding paper tray. Use **Manual Feed** when printing on special materials like envelopes and transparencies. You have to load one sheet at a time into the Manual Tray or Multi-Purpose Tray.
If the paper source is set to **Auto Select**, the printer automatically picks up print material in the following tray order: Manual Tray or Multi-Purpose Tray, Tray1, Optional Tray2

❹ Type

Set **Type** to correspond to the paper loaded in the tray from which you want to print. This will let you get the best quality printout. If not, print quality may not be acheived as you want.
Cotton: 20 lb to 24 lb (75~90 g/m2) cotton paper such as Gilbert 25 % and Gilbert 100 %.
Plain Paper: Normal plain paper. Select this type if your printer is monochrome and printing on the 16 lb (60 g/m2) cotton paper.
Recycled: 20 lb to 24 lb (75~90 g/m2) recycled paper.
Color Paper: 20 lb to 24 lb (75~90 g/m2) color-backgrounded paper.

First Page

This property allows you to print the first page using a different paper type from the rest of the document. You can select the paper source for the first page.
For example, load thick stock for the first page into the Multi-purpose Tray, and plain paper into Tray1. Then, select **Tray1** in the **Source** option and **Multi-Purpose Tray** in the **First Page** option. ***Some printers do not support this feature.***

❺ Scaling Printing

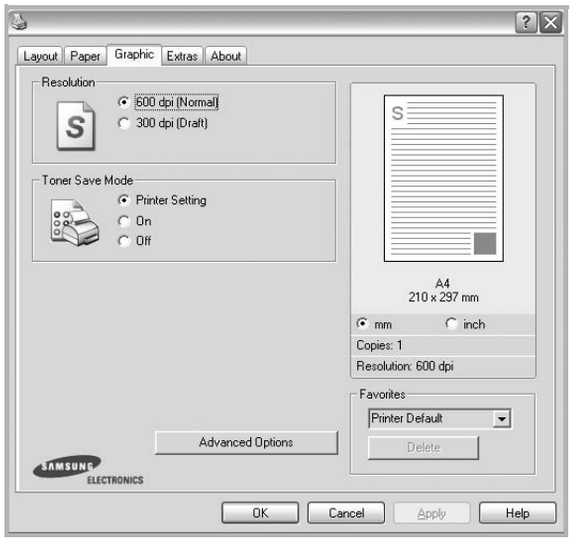
Scaling Printing allows you to automatically or manually scale your print job on a page. You can choose from **None**, **Reduce/ Enlarge**, and **Fit to Page**.

- For details, see “Printing a Reduced or Enlarged Document” on page 20.
- For details, see “Fitting Your Document to a Selected Paper Size” on page 20.

Graphics Tab

Use the following Graphic options to adjust the print quality for your specific printing needs. See “Printing a Document” on page 12 for more information on accessing printer properties.

Click the **Graphic** tab to display the properties shown below..



Resolution

The Resolution options you can select may vary depending on your printer model. The higher the setting, the sharper the clarity of printed characters and graphics. The higher setting also may increase the time it takes to print a document.

Image Mode

The available options are Normal and Text Enhance. ***Some printers do not support this feature.***

- **Printer Setting**: If you select this option, this feature is determined by the setting you’ve made on the control panel of the printer.
- **Normal(1,2,3)**: This setting is for normal documents.
- **Text Enhance**: Image Mode allows the user to enhance printouts.

Toner Save Mode

Selecting this option extends the life of your toner cartridge and reduces your cost per page without a significant reduction in print quality. ***Some printers do not support this feature.***

- **Printer Setting**: If you select this option, this feature is determined by the setting you’ve made on the control panel of the printer.
- **On**: Select this option to allow the printer to use less toner on each page.
- **Off**: If you don’t need to save toner when printing a document, select this option.

Advanced Options

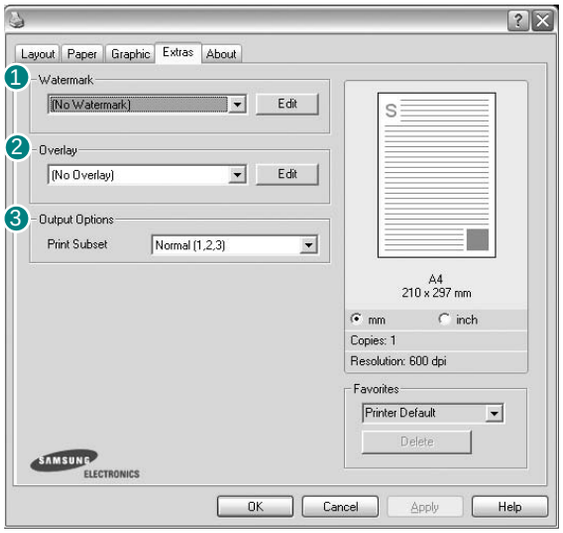
You can set advanced settings by clicking the **Advanced Options** button.

- **TrueType Options**: This option determines what the driver tells the printer about how to image the text in your document. Select the appropriate setting according to the status of your document. ***This option may be available only in Windows 9x/Me, depending on your particular printer model.***
  - **Download as Outline**: When this option is selected, the driver will download any TrueType fonts that are used in your document not already stored (resident) on your printer. If, after printing a document, you find that the fonts did not print correctly, choose Download as bit image and resubmit your print job. The Download as bit image setting is often useful when printing Adobe. ***This feature is available only when you use the PCL printer driver.***
  - **Download as Bitmap**: When this option is selected, the driver will download the font data as bitmap images. Documents with complicated fonts, such as Korean or Chinese, or various other fonts, will print faster in this setting.
  - **Print as Graphics**: When this option is selected, the driver will download any fonts as graphics. When printing documents with high graphic content and relatively few TrueType fonts, printing performance (speed) may be enhanced in this setting.
- **Print All Text To Black**: When the **Print All Text To Black** option is checked, all text in your document prints solid black, regardless of the color it appears on the screen.
- **Print All Text To Darken**: When the **Print All Text To Darken** option is checked, all text in your document is allowed to print darker than on a normal document. ***Some printers do not support this feature.***

Extras Tab

You can select output options for your document. See “Printing a Document” on page 12 for more information about accessing the printer properties.

Click the **Extras** tab to access the following feature:



❶ Watermark

You can create a background text image to be printed on each page of your document. For details, see “Using Watermarks” on page 21.

❷ Overlay

Overlays are often used to take the place of preprinted forms and letterhead paper. For details, see “Using Overlays” on page 22.

❸ Output Options

- **Print Subset**: You can set the sequence in which the pages print. Select the print order from the drop-down list.
  - **Normal(1,2,3)**: Your printer prints all pages from the first page to the last page.
  - **Reverse All Pages(3,2,1)**: Your printer prints all pages from the last page to the first page.
  - **Print Odd Pages**: Your printer prints only the odd numbered pages of the document.
  - **Print Even Pages**: Your printer prints only the even numbered pages of the document.
- **Use Printer Fonts**: When Use Printer Fonts is checked, the printer uses the fonts that are stored in its memory (resident fonts) to print your document, rather than downloading the fonts used in your document. Because downloading fonts takes time, selecting this option can speed up your printing time. When using Printer fonts, the printer will try to match the fonts used in your document to those stored in its memory. If, however, you use fonts in your document that are very different from those resident in the printer, your printed output will appear very different from what it looks like on the screen. ***This feature is available only when you use the PCL printer driver.***

About Tab

Use the **About** tab to display the copyright notice and the version number of the driver. If you have an Internet browser, you can connect to the Internet by clicking on the web site icon. See “Printing a Document” on page 12 for more information about accessing printer properties.

Printer Tab

If you access printer properties through the **Printers** folder, you can view the **Printer** tab. You can set the printer configuration.

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

1. Click the Windows **Start** menu.
2. Select **Printers and Faxes**.
3. Select **your printer driver** icon.
4. Right-click on the printer driver icon and select **Properties**.
5. Click the **Printer** tab and set the options.

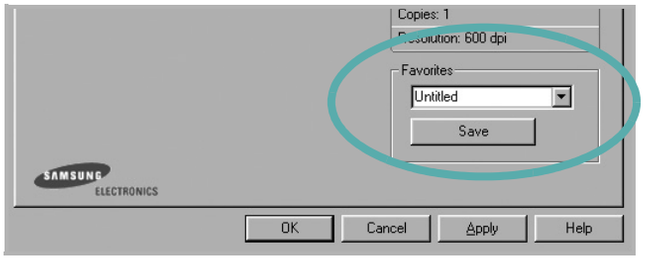
Using a Favorite Setting

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

To save a **Favorites** item:

1 Change the settings as needed on each tab.

2 Enter a name for the item in the **Favorites** input box.



3 Click **Save**.

When you save **Favorites**, all current driver settings are saved.

To use a saved setting, select the item from the **Favorites** drop down list. The printer is now set to print according to the Favorites setting you selected.

To delete a Favorites item, select it from the list and click **Delete**.

You can also restore the printer driver's default settings by selecting **Printer Default** from the list.

Using Help

Your printer has a help screen that can be activated by clicking the **Help** button in the printer properties window. These help screens give detailed information about the printer features provided by the printer driver.

You can also click ? from the upper right corner of the window, and then click on any setting.

3 Advanced Printing

This chapter explains printing options and advanced printing tasks.

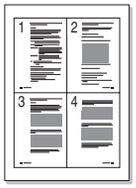
NOTE:

- Your printer driver **Properties** window that appears in this User's Guide may differ depending on the printer in use. However the composition of the printer properties window is similar.
- If you need to know the exact name of your printer, you can check the supplied CD-ROM.

This chapter includes:

- **Printing Multiple Pages on One Sheet of Paper (N-Up Printing)**
- **Printing Posters**
- **Printing Booklets**
- **Printing on Both Sides of Paper**
- **Printing a Reduced or Enlarged Document**
- **Fitting Your Document to a Selected Paper Size**
- **Using Watermarks**
- **Using Overlays**

Printing Multiple Pages on One Sheet of Paper (N-Up Printing)

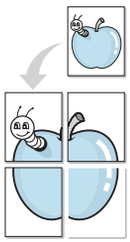


You can select the number of pages to print on a single sheet of paper. To print more than one page per sheet, the pages will be reduced in size and arranged in the order you specify. You can print up to 16 pages on one sheet.

1. To change the print settings from your software application, access printer properties. See "Printing a Document" on page 12.
2. From the **Layout** tab, choose **Multiple Pages per Side** in the **Layout Type** drop-down list.
3. Select the number of pages you want to print per sheet (1, 2, 4, 6, 9, or 16) in the **Pages per Side** drop-down list.
4. Select the page order from the **Page Order** drop-down list, if necessary.

   Check **Print Page Border** to print a border around each page on the sheet.
5. Click the **Paper** tab, select the paper source, size, and type.
6. Click **OK** and print the document.

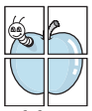
Printing Posters



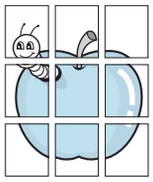
This feature allows you to print a single-page document onto 4, 9, or 16 sheets of paper, for the purpose of pasting the sheets together to form one poster-size document.

1. To change the print settings from your software application, access printer properties. See “Printing a Document” on page 12.
2. Click the **Layout** tab, select **Poster Printing** in the **Layout Type** drop-down list.
3. Configure the poster option:

   You can select the page layout from **Poster<2x2>**, **Poster<3x3>**, or **Poster<4x4>**. If you select **Poster<2x2>**, the output will be automatically stretched to cover 4 physical pages.

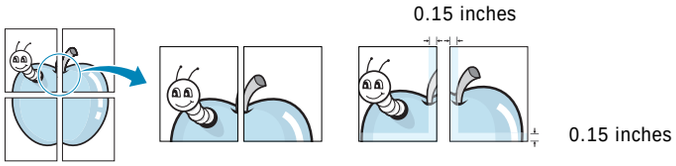


▲ 2x2



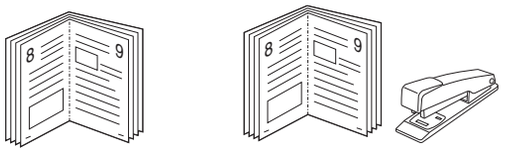
▲ 3x3

   Specify an overlap in millimeters or inches to make it easier to pasting the sheets together.



4. Click the **Paper** tab, select the paper source, size, and type.
5. Click **OK** and print the document. You can complete the poster by pasting the sheets together.

Printing Booklets



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

1. To change the print settings from your software application, access the printer properties. See “Printing a Document” on page 12.
2. From the **Layout** tab, choose **Booklet Printing** from the **Type** drop-down list.

NOTE: The booklet printing option is available when A4, Letter, Legal, or Folio size is selected in the **Size** option on the **Paper** tab.

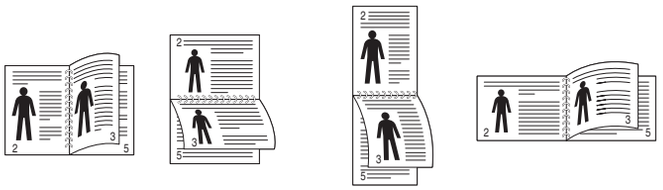
3. Click the **Paper** tab, and select the paper source, size, and type.
4. Click **OK** and print the document.
5. After printing, fold and staple the pages.

Printing on Both Sides of Paper

You can print on both sides of a sheet of paper. Before printing, decide how you want your document oriented.

The options are:

- **Printer Setting**, if you select this option, this feature is determined by the setting you've made on the control panel of the printer. ***Some printers do not support this feature.***
- **None**
- **Long Edge**, which is the conventional layout used in book binding.
- **Short Edge**, which is the type often used with calendars.



▲ Long Edge ▲ Short Edge

- **Reverse Duplex**, allows you to select general print order compare to duplex print order. ***Some printers do not support this feature.***

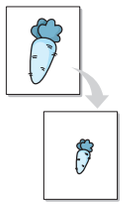
NOTE:

- Do not print on both sides of labels, transparencies, envelopes, or thick paper. Paper jamming and damage to the printer may result.
- To use double-sided printing, you can use only the following paper sizes: A4, Letter, Legal, and Folio, with a weight of 20~24 lbs (75~90 g/m²).

1. To change the print settings from your software application, access printer properties. "Printing a Document" on page 12.
2. From the **Layout** tab, select the paper orientation.
3. From the **Double-sided Printing** section, select the duplex binding option you want.
4. Click the **Paper** tab and select the paper source, size, and type.
5. Click **OK** and print the document.

NOTE: If your printer does not have a duplex unit, you should complete the printing job manually. The printer prints every other page of the document first. After printing the first side of your job, the Printing Tip window appears. Follow the on-screen instructions to complete the printing job.

Printing a Reduced or Enlarged Document

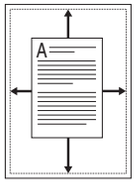


You can change the size of a page's content to appear larger or smaller on the printed page.

1. To change the print settings from your software application, access printer properties. See "Printing a Document" on page 12.
2. From the **Paper** tab, select **Reduce / Enlarge** in the **Printing Type** drop-down list.
3. Enter the scaling rate in the **Percentage** input box.

   You can also click the ▼ or ▲ button.
4. Select the paper source, size, and type in **Paper Options**.
5. Click **OK** and print the document.

Fitting Your Document to a Selected Paper Size



This printer feature allows you to scale your print job to any selected paper size regardless of the digital document size. This can be useful when you want to check fine details on a small document.

1. To change the print settings from your software application, access printer properties. See "Printing a Document" on page 12.
2. From the **Paper** tab, select **Fit to Page** in the **Printing Type** drop-down list.
3. Select the correct size from the **Target Page** drop-down list.
4. Select the paper source, size, and type in **Paper Options**.
5. Click **OK** and print the document.

Using Watermarks

The Watermark option allows you to print text over an existing document. For example, you may want to have large gray letters reading “DRAFT” or “CONFIDENTIAL” printed diagonally across the first page or all pages of a document.

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

Using an Existing Watermark

1. To change the print settings from your software application, access printer properties. See “Printing a Document” on page 12.
2. Click the **Extras** tab, and select the desired watermark from the **Watermark** drop-down list. You will see the selected watermark in the preview image.
3. Click **OK** and start printing.

NOTE: The preview image shows how the page will look when it is printed.

Creating a Watermark

1. To change the print settings from your software application, access printer properties. See “Printing a Document” on page 12.
2. Click the **Extras** tab, and click the **Edit** button in the **Watermark** section. The **Edit Watermark** window appears.
3. Enter a text message in the **Watermark Message** box. You can enter up to 40 characters. The message displays in the preview window.

   When the **First Page Only** box is checked, the watermark prints on the first page only.
4. Select watermark options.

   You can select the font name, style, size, or grayscale level from the **Font Attributes** section and set the angle of the watermark from the **Message Angle** section.
5. Click **Add** to add a new watermark to the list.
6. When you have finished editing, click **OK** and start printing.

To stop printing the watermark, select **<No Watermark>** from the **Watermark** drop-down list.

Editing a Watermark

1. To change the print settings from your software application, access printer properties. See “Printing a Document” on page 12.
2. Click the **Extras** tab and click the **Edit** button in the **Watermark** section. The **Edit Watermark** window appears.
3. Select the watermark you want to edit from the **Current Watermarks** list and change the watermark message and options.
4. Click **Update** to save the changes.
5. Click **OK** until you exit the Print window.

Deleting a Watermark

1. To change the print settings from your software application, access printer properties. See “Printing a Document” on page 12.
2. From the **Extras** tab, click the **Edit** button in the Watermark section. The **Edit Watermark** window appears.
3. Select the watermark you want to delete from the **Current Watermarks** list and click **Delete**.
4. Click **OK** until you exit the Print window.

Using Overlays

What is an Overlay?

An overlay is text and/or images stored in the computer hard disk drive (HDD) as a special file format that can be printed on any document. Overlays are often used to take the place of preprinted forms and letterhead paper. Rather than using preprinted letterhead, you can create an overlay containing the exact same information that is currently on your letterhead. To print a letter with your company's letterhead, you do not need to load preprinted letterhead paper in the printer. You need only tell the printer to print the letterhead overlay on your document.

Creating a New Page Overlay

To use a page overlay, you must create a new page overlay containing your logo or image.

1. Create or open a document containing text or an image for use in a new page overlay. Position the items exactly as you wish them to appear when printed as an overlay.
2. To save the document as an overlay, access printer properties. See "Printing a Document" on page 12.
3. Click the **Extras** tab, and click **Edit** button in the **Overlay** section.
4. In the Edit Overlay window, click **Create Overlay**.
5. In the Create Overlay window, type a name of up to eight characters in the **File name** box. Select the destination path, if necessary. (The default is C:\Formover).
6. Click **Save**. The name appears on the **Overlay List** box.
7. Click **OK** or **Yes** to finish creating.

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

NOTE: The overlay document size must be the same as the documents you print with the overlay. Do not create an overlay with a watermark.

Using a Page Overlay

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

1. Create or open the document you want to print.
2. To change the print settings from your software application, access printer properties. See "Printing a Document" on page 12.
3. Click the **Extras** tab.
4. Select the desired overlay from the **Overlay** drop-down list box.
5. If the overlay file you want does not appear in the **Overlay** list, click **Edit** button and **Load Overlay**, and select the overlay file.

   If you have stored the overlay file you want to use in an external source, you can also load the file when you access the **Load Overlay** window.

   After you select the file, click **Open**. The file appears in the **Overlay List** box and is available for printing. Select the overlay from the **Overlay List** box.
6. If necessary, click **Confirm Page Overlay When Printing**. If this box is checked, a message window appears each time you submit a document for printing, asking you to confirm your wish to print an overlay on your document.

   If this box is not checked and an overlay has been selected, the overlay automatically prints with your document.
7. Click **OK** or **Yes** until printing begins.

   The selected overlay downloads with your print job and prints on your document.

NOTE: The resolution of the overlay document must be the same as that of the document you will print with the overlay.

Deleting a Page Overlay

You can delete page overlays that you no longer use.

1. In the printer properties window, click the **Extras** tab.
2. Click the **Edit** button in the **Overlay** section.
3. Select the overlay you want to delete from the **Overlay List** box.
4. Click **Delete Overlay**.
5. When a confirming message window appears, click **Yes**.
6. Click **OK** until you exit the Print window.

4 Using Windows PostScript Driver

If you want to use the PostScript driver provided with your system CD-ROM to print a document.

PPDs, in combination with the PostScript driver, access printer features and allow the computer to communicate with the printer. An installation program for the PPDs is provided on the supplied software CD-ROM.

This chapter includes:

Printer Settings

You can use the printer properties window, which allows you to access all of the printer options you need when using your printer. When the printer properties are displayed, you can review and change the settings needed for your print job.

Your printer properties window may differ, depending on your operating system. This Software User's Guide shows the Properties window for Windows XP.

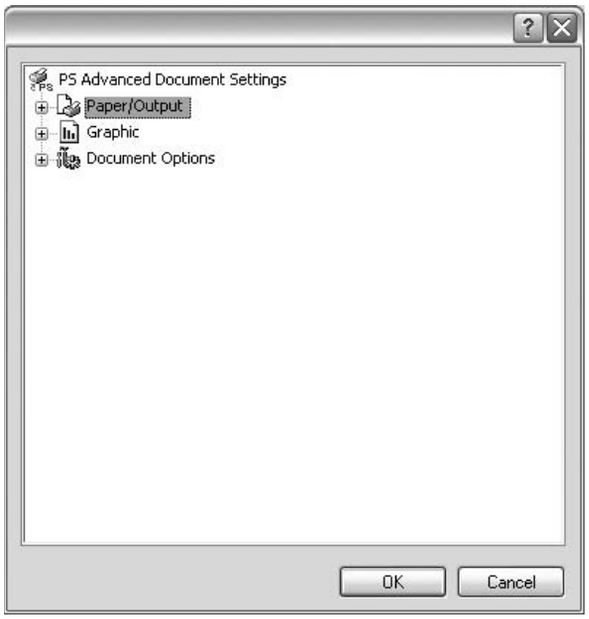
Your printer driver **Properties** window that appears in this User's Guide may differ depending on the printer in use.

NOTES:

- Most Windows applications will override settings you specify in the printer driver. Change all print settings available in the software application first, and change any remaining settings using the printer driver.
- The settings you change remain in effect only while you are using the current program. **To make your changes permanent**, make them in the Printers folder.
- The following procedure is for Windows XP. For other Windows OS, refer to the corresponding Windows User's Guide or online help.
  1. Click the Windows **Start** button.
  2. Select **Printers and Faxes**.
  3. Select **your printer driver icon**.
  4. Right-click on the printer driver icon and select **Printing Preferences**.
  5. Change the settings on each tab, click OK.

Advanced

You can use advanced settings by clicking the **Advanced** button.



- **Paper/Output** this option allows you to select the size of the paper loaded in the tray.
- **Graphic** this option allows you to adjust the print quality for your specific printing needs.
- **Document Options** this options allow you to set the PostScript options or printer features.

Using Help

You can click ? from the upper right corner of the window, and then click on any setting.

5 Sharing the Printer Locally

You can connect the printer directly to a selected computer, which is called “host computer,” on the network.

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

NOTES:
- Check the Operating System(s) that are compatible with your printer. Please refer to the OS Compatibility section of Printer Specifications in your Printer User’s Guide.
- If you need to know the exact name of your printer, you can check the supplied CD-ROM.

Setting Up a Host Computer

1. Start Windows.
2. From the **Start** menu select **Printers and Faxes**.
3. Double-click **your printer driver icon**.
4. From the **Printer** menu, select **Sharing**.
5. Check the **Share this printer** box.
6. Fill in the **Shared Name** field, and then click **OK**.

Setting Up a Client Computer

1. Right-click the Windows **Start** button and select **Explorer**.
2. Open your network folder in the left column.
3. Click the shared name.
4. From the **Start** menu select **Printers and Faxes**.
5. Double-click **your printer driver icon**.
6. From the **Printer** menu, select **Properties**.
7. From the **Ports** tab, click **Add Port**.
8. Select **Local Port** and click **New Port**.
9. Fill in the **Enter a port name** field with the shared name.
10. Click **OK** and click **Close**.
11. Click **Apply** and click **OK**.

6 Using Smart Panel

Smart Panel is a program that monitors and informs you of the status of the printer, and allows you to customize the printer's settings. Smart Panel is installed automatically when you install the printer software.

NOTES:

- To use this program, you need:
  - Windows 98 or higher (Windows NT 4.0 can be used only for network-supported printers.) To check for Operating System(s) that are compatible with your printer, refer to Printer Specifications in your Printer User's Guide.
  - Mac OS X 10.3 or higher
  - Linux. To check for Linux systems that are compatible with your printer, refer to Printer Specifications in your Printer User's Guide.
  - Internet Explorer version 5.0 or higher for flash animation in HTML Help.
- If you need to know the exact name of your printer, you can check the supplied CD-ROM.

Understanding Smart Panel

If an error occurs while printing, Smart Panel appears automatically, showing the error.

You can also launch Smart Panel manually. Double-click the Smart Panel icon on the Windows task bar (in Windows), or Notification Area (in Linux). You can also click it on the status bar (in Mac OS X).

Double-click this icon in Windows.

Click this icon in Mac OS X.

Double-click this icon in Linux.

If you are a Windows user, from the **Start** menu, select **Programs** or **All Programs** → **your printer driver name** → **Smart Panel**.

NOTES:

- If you have already installed more than one Samsung printer, first select the printer model you want in order to use the corresponding Smart Panel. Right-click (in Windows or Linux) or click (in Mac OS X) the Smart Panel icon and select **your printer name**.
- The Smart Panel window and its contents shown in this Software User's Guide may differ depending on the printer or Operating System in use.

The Smart Panel program displays the current status of the printer, the level of toner remaining in the toner cartridge(s) and various other information. You can also change settings.

❶ Toner Level

You can view the level of toner remaining in the toner cartridge(s). The printer and the number of toner cartridge(s) shown in the above window may differ depending on the printer in use. Any printers do not have this feature.

❷ Buy Now

You can order replacement toner cartridge(s) online.

❸ Troubleshooting Guide

You can view Help to solve problems.

❹ Printer Setting

You can configure various printer settings in the Printer Settings Utility window. Any printers do not have this feature.

NOTE: If your printer is connected to a network and you are a Windows user, the **SyncThru Web Service** window appears instead of the Printer Settings Utility window. Mac OS X and Linux do not support network environments.

5 Driver Setting (Only for Windows)
You can use the printer properties window, which allows you to access all of the printer options you need for using your printer. For details, See “Printer Settings” on page 13.

Opening the Troubleshooting Guide

Using the troubleshooting guide, you can view solutions for error status problems.

Right-click (in Windows or Linux) or click (in Mac OS X) the Smart Panel icon and select **Troubleshooting Guide**.

Using Printer Settings Utility

Using the Printer Settings Utility, you can configure and check print settings.

1. Right-click (in Windows or Linux) or click (in Mac OS X) the Smart Panel icon and select **Printer Setting**.
2. Change the settings.
3. To send the changes to the printer, click the **Apply** button.

NOTES: If your printer is connected to a network, the **SyncThru Web Service** window appears instead of the Printer Settings Utility window.

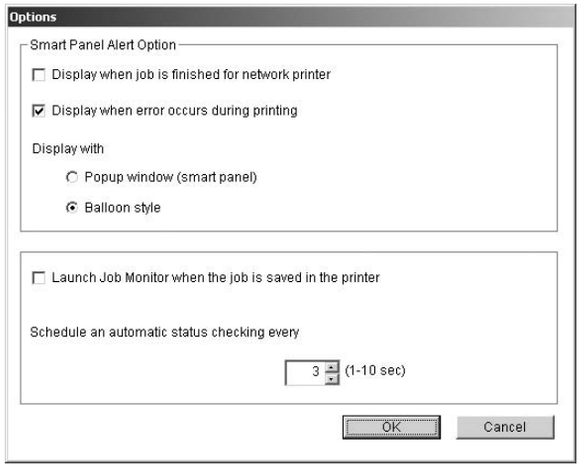
Using Onscreen Help File

For more information about **Printer Settings Utility**, click ?.

Changing the Smart Panel Program Settings

Right-click (in Windows or Linux) or click (in Mac OS X) the Smart Panel icon and select **Options**.

The following window opens.



- **Display when job is finished for network printer**: The computer shows the Smart Panel popup window or balloon when your job is complete in Windows. ***(Only for network-supported printers.)***
- **Display when error occurs during printing**: The computer shows the Smart Panel popup window or balloon when an error occurs during printing.
- **Display with**: You can select how the computer shows you a message. If you select **Popup window (smart panel)**, the message appears in the Smart Panel popup window in Windows and Mac OS X.
- **Launch Job Monitor when the job is saved in the printer**: If you store print jobs on the printer’s hard disk, the computer opens the Job Monitor window in Windows. ***(Only for network-supported printers with built-in hard disks.)***
- **Schedule an automatic status checking every**: The computer updates the printer status regularly. Setting the value close to 1 second causes the computer to check the printer status more frequently, thereby allowing a faster response to any printer error.

7 Using Your Printer in Linux

You can use your machine in a Linux environment.

This chapter includes:

- **Getting Started**
- **Installing the Unified Linux Driver**
- **Using the Unified Driver Configurator**
- **Configuring Printer Properties**
- **Printing a Document**
- **Scanning a Document (for MFP device only)**

Getting Started

The supplied CD-ROM provides you with Samsung's Unified Linux Driver package for using your machine with a Linux computer.

Samsung's Unified Linux Driver package contains printer and scanner drivers, providing the ability to print documents and scan images. The package also delivers powerful applications for configuring your machine and further processing of the scanned documents.

After the driver is installed on your Linux system, the driver package allows you to monitor a number of machine devices via fast ECP parallel ports and USB simultaneously. The acquired documents can then be edited, printed on the same local or network machine devices, sent by e-mail, uploaded to an FTP site, or transferred to an external OCR system.

The Unified Linux Driver package is supplied with a smart and flexible installation program. You don't need to search for additional components that might be necessary for the Unified Linux Driver software: all required packages will be carried onto your system and installed automatically; this is possible on a wide set of the most popular Linux clones.

Installing the Unified Linux Driver

Installing the Unified Linux Driver

1 Make sure that you connect your machine to your computer. Turn both the computer and the machine on.

2 When the Administrator Login window appears, type in *root* in the Login field and enter the system password.

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

3 Insert the printer software CD-ROM. The CD-ROM will automatically run.

If the CD-ROM does not automatically run, click the icon at the bottom of the desktop. When the Terminal screen appears, type in:

If the CD-ROM is secondary master and the location to mount is /mnt/cdrom,

[root@localhost root]#mount -t iso9660 /dev/hdc /mnt/cdrom

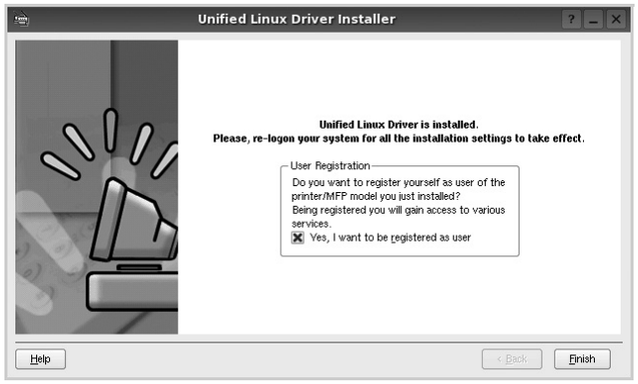
[root@localhost root]#cd /mnt/cdrom/Linux

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

NOTE: The installation program runs automatically if you have an autorun software package installed and configured.

4 When the welcome screen appears, click **Next**.

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



The installation program has added the Unified Driver Configurator desktop icon and Samsung Unified Driver group to the system menu for your convenience. If you have any difficulties, consult the onscreen help that is available through your system menu or can otherwise be called from the driver package windows applications, such as **Unified Driver Configurator** or **Image Manager**.

Uninstalling the Unified Linux Driver

1 When the Administrator Login window appears, type in *root* in the Login field and enter the system password.

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

2 Insert the printer software CD-ROM. The CD-ROM will automatically run.

If the CD-ROM does not automatically run, click the icon at the bottom of the desktop. When the Terminal screen appears, type in:

If the CD-ROM is secondary master and the location to mount is /mnt/cdrom,

[root@localhost root]#mount -t iso9660 /dev/hdc /mnt/cdrom

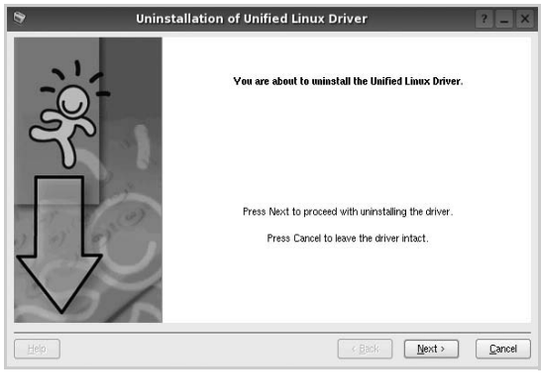
[root@localhost root]#cd /mnt/cdrom/Linux

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

NOTE: The installation program runs automatically if you have an autorun software package installed and configured.

3 Click **Uninstall**.

4 Click **Next**.



5 Click **Finish**.

Using the Unified Driver Configurator

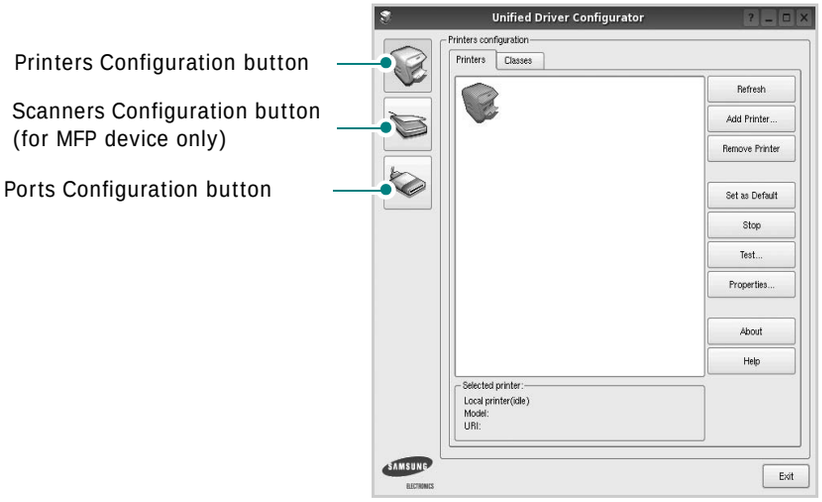
Unified Linux Driver Configurator is a tool primarily intended for configuring Printer or MFP devices. Since an MFP device combines the printer and scanner, the Unified Linux Driver Configurator provides options logically grouped for printer and scanner functions. There is also a special MFP port option responsible for the regulation of access to an MFP printer and scanner via a single I/O channel.

After installing the Unified Linux driver (see page A.3), the Unified Linux Driver Configurator icon will automatically be created on your desktop.

Opening the Unified Driver Configurator

1. Double-click **Unified Driver Configurator** on the desktop.

   You can also click the Startup Menu icon and select **Samsung Unified Driver** and then **Unified Driver Configurator**.
2. Press each button on the Modules pane to switch to the corresponding configuration window.



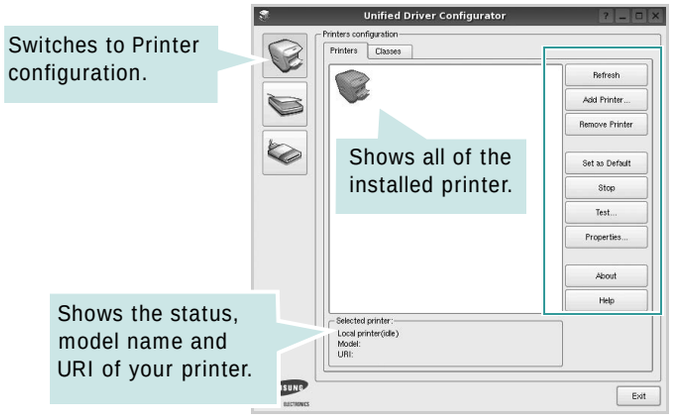
   You can use the onscreen help by clicking **Help**.
3. After changing the configurations, click **Exit** to close the Unified Driver Configurator.

Printers Configuration

Printers configuration has the two tabs; **Printers** and **Classes**.

Printers Tab

You can see the current system's printer configuration by clicking on the printer icon button on the left side of the Unified Driver Configurator window.

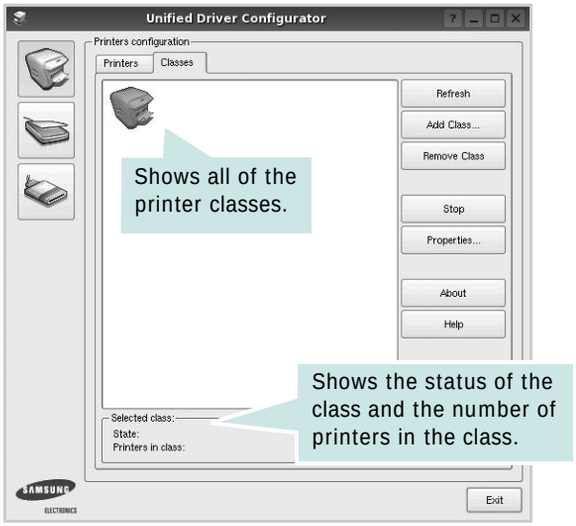


You can use the following printer control buttons:

- **Refresh**: renews the available printers list.
- **Add Printer**: allows you to add a new printer.
- **Remove Printer**: removes the selected printer.
- **Set as Default**: sets the current printer as a default printer.
- **Stop/Start**: stops/starts the printer.
- **Test**: allows you to print a test page to check if the machine is working properly.
- **Properties**: allows you to view and change the printer properties. For details, see page 31.

Classes Tab

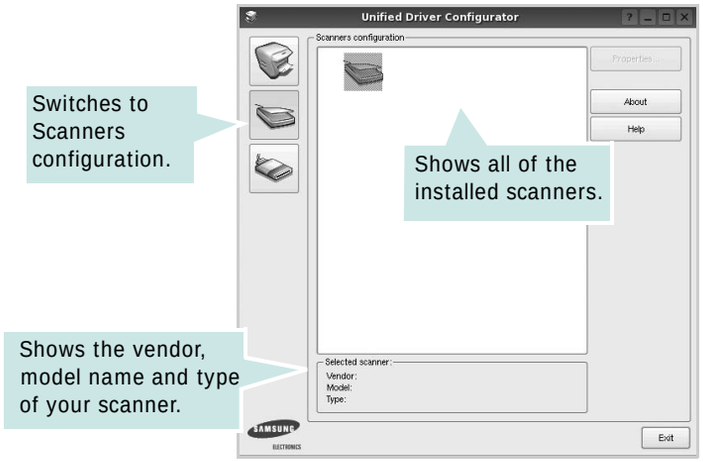
The Classes tab shows a list of available printer classes.



- **Refresh** : Renews the classes list.
- **Add Class... :** Allows you to add a new printer class.
- **Remove Class :** Removes the selected printer class.

Scanners Configuration (for MFP device only)

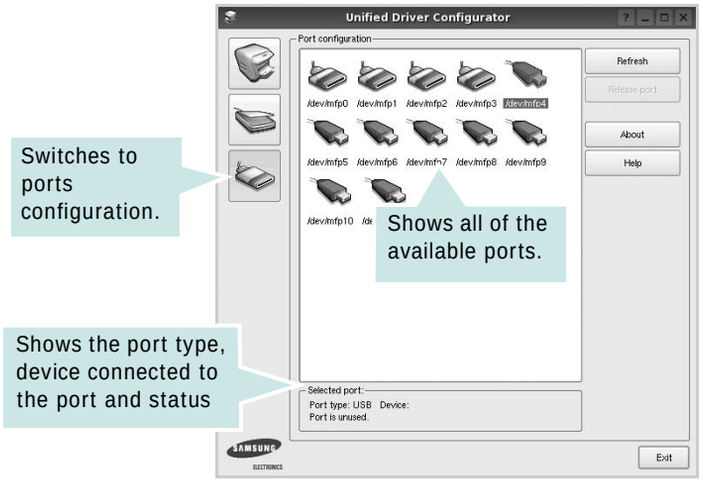
In this window, you can monitor the activity of scanner devices, view a list of installed Samsung MFP devices, change device properties, and scan images.



- **Properties...** : Allows you to change the scan properties and scan a document. See page 32.
- **Drivers... :** Allows you to monitor the activity of the scan drivers.

Ports Configuration

In this window, you can view the list of available ports, check the status of each port and release a port that is stalled in busy state when its owner is terminated for any reason.



- **Refresh** : Renews the available ports list.
- **Release port :** Releases the selected port.

Sharing Ports Between Printers and Scanners (for MFP device only)

Your machine may be connected to a host computer via the parallel port or USB port. Since the MFP device contains more than one device (printer and scanner), it is necessary to organize proper access of “consumer” applications to these devices via the single I/O port.

The Samsung Unified Linux Driver package provides an appropriate port sharing mechanism that is used by Samsung printer and scanner drivers. The drivers address their devices via so-called MFP ports. The current status of any MFP port can be viewed via the Ports Configuration. The port sharing prevents you from accessing one functional block of the MFP device, while another block is in use.

When you install a new MFP device onto your system, it is strongly recommended you do this with the assistance of an Unified Driver Configurator. In this case you will be asked to choose I/O port for the new device. This choice will provide the most suitable configuration for MFP’s functionality. For MFP scanners I/O ports are being chosen by scanner drivers automatically, so proper settings are applied by default.

Configuring Printer Properties

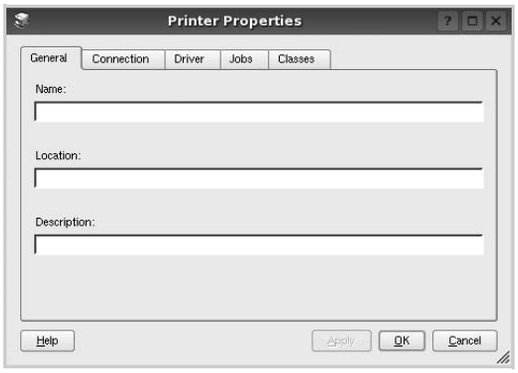
Using the properties window provided by the Printers configuration, you can change the various properties for your machine as a printer.

1 Open the Unified Driver Configurator.

If necessary, switch to Printers configuration.

2 Select your machine on the available printers list and click **Properties**.

3 The Printer Properties window opens.



The following five tabs display at the top of the window:

- **General**: allows you to change the printer location and name. The name entered in this tab displays on the printer list in Printers configuration.
- **Connection**: allows you to view or select another port. If you change the printer port from USB to parallel or vice versa while in use, you must re-configure the printer port in this tab.
- **Driver**: allows you to view or select another printer driver. By clicking **Options**, you can set the default device options.
- **Jobs**: shows the list of print jobs. Click **Cancel job** to cancel the selected job and select the **Show completed jobs** check box to see previous jobs on the job list.
- **Classes**: shows the class that your printer is in. Click **Add to Class** to add your printer to a specific class or click **Remove from Class** to remove the printer from the selected class.

4 Click **OK** to apply the changes and close the Printer Properties Window.

Printing a Document

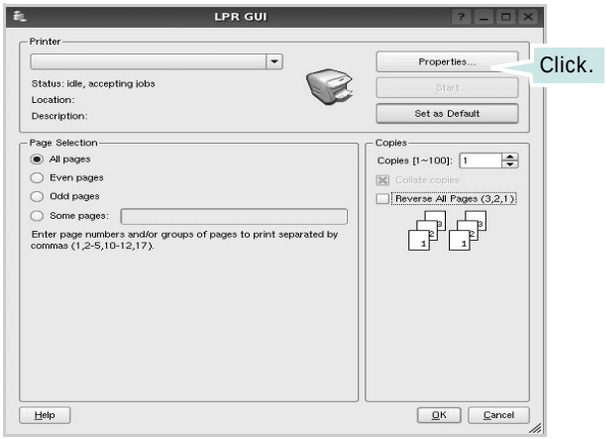
Printing from Applications

There are a lot of Linux applications that you are allowed to print from using Common UNIX Printing System (CUPS). You can print on your machine from any such application.

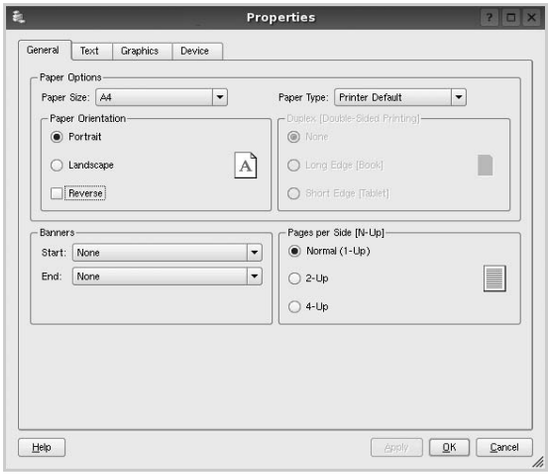
1 From the application you are using, select **Print** from the **File** menu.

2 Select **Print** directly using **lpr**.

3 In the LPR GUI window, select the model name of your machine from the Printer list and click **Properties**.



4 Change the printer and print job properties.



The following four tabs display at the top of the window.

- **General** - allows you to change the paper size, the paper type, and the orientation of the documents, enables the duplex feature, adds start and end banners, and changes the number of pages per sheet.
- **Text** - allows you to specify the page margins and set the text options, such as spacing or columns.
- **Graphics** - allows you to set image options that are used when printing images/files, such as color options, image size, or image position.
- **Device**: allows you to set the print resolution, paper source, and destination.

5 Click **OK** to apply the changes and close the Properties window.

6 Click **OK** in the LPR GUI window to start printing.

7 The Printing window appears, allowing you to monitor the status of your print job.

To abort the current job, click **Cancel**.

Printing Files

You can print many different types of files on the Samsung machine device using the standard CUPS way - directly from the command line interface. The CUPS lpr utility allows you do that. But the drivers package replaces the standard lpr tool by a much more user-friendly Samsung LPR program.

To print any document file:

1 Type *lpr <file_name>* from the Linux shell command line and press **Enter**. The LPR GUI window appears.

When you type only *lpr* and press **Enter**, the Select file(s) to print window appears first. Just select any files you want to print and click **Open**.

2 In the LPR GUI window, select your printer from the list, and change the printer and print job properties.

For details about the properties window, see page 31.

3 Click **OK** to start printing.

Scanning a Document (for MFP device only)

You can scan a document using the Unified Driver Configurator window.

1 Double-click the Unified Driver Configurator on your desktop.

2 Click the button to switch to Scanners Configuration.

3 Select the scanner on the list.

When you have only one MFP device and it is connected to the computer and turned on, your scanner appears on the list and is automatically selected.

If you have two or more scanners attached to your computer, you can select any scanner to work at any time. For example, while acquisition is in progress on the first scanner, you may select the second scanner, set the device options and start the image acquisition simultaneously.

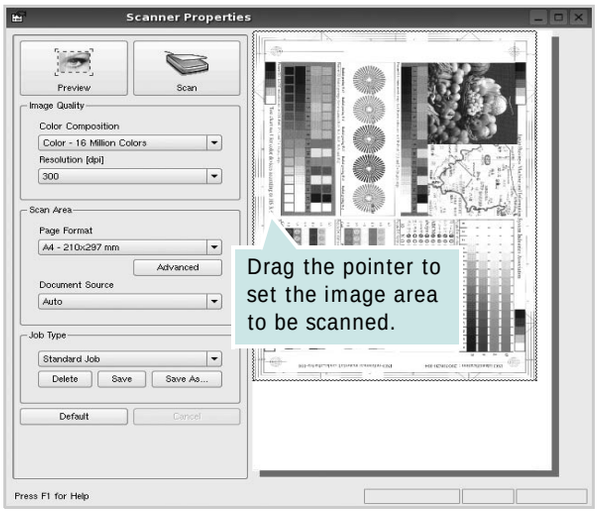
NOTE: The scanner name shown in Scanners configuration can be different from the device name.

4 Click **Properties**.

5 Load the document to be scanned face up into the ADF (Automatic Document Feeder) or face down on the document glass.

6 Click **Preview** in the Scanner Properties window.

The document is scanned and the image preview appears in the Preview Pane.



7 Change the scan options in the Image Quality and Scan Area sections.

- **Image Quality**: allows you to select the color composition and the scan resolution for the image.
- **Scan Area**: allows you to select the page size. The **Advanced** button enables you to set the page size manually.

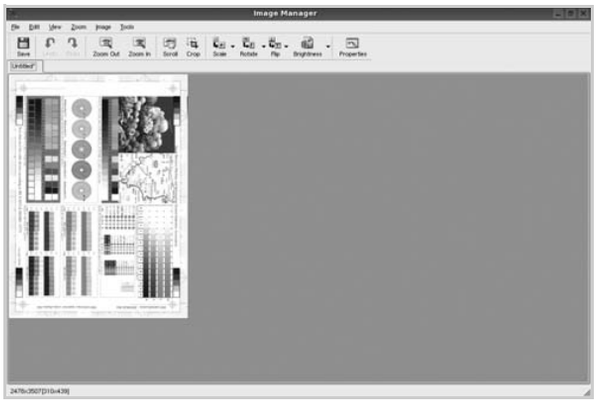
If you want to use one of the preset scan option settings, select from the Job Type drop-down list. For details about the preset Job Type settings, see page 33.

You can restore the default setting for the scan options by clicking **Default**.

8 When you have finished, click **Scan** to start scanning.

The status bar appears on the bottom left of the window to show you the progress of the scan. To cancel scanning, click **Cancel**.

9 The scanned image appears in the new Image Manager tab.



If you want to edit the scanned image, use the toolbar. For further details about editing an image, see page 33.

10 When you are finished, click **Save** on the toolbar.

11 Select the file directory where you want to save the image and enter the file name.

12 Click **Save**.

Adding Job Type Settings

You can save your scan option settings to retrieve for a later scanning.

To save a new Job Type setting:

1 Change the options from the Scanner Properties window.

2 Click **Save As**.

3 Enter the name for your setting.

4 Click **OK**.

Your setting is added to the Saved Settings drop-down list.

To save a Job Type setting for the next scan job:

1 Select the setting you want to use from the Job Type drop-down list.

2 Click **Save**.

The next time you open the Scanner Properties window, the saved setting is automatically selected for the scan job.

To delete a Job Type setting:

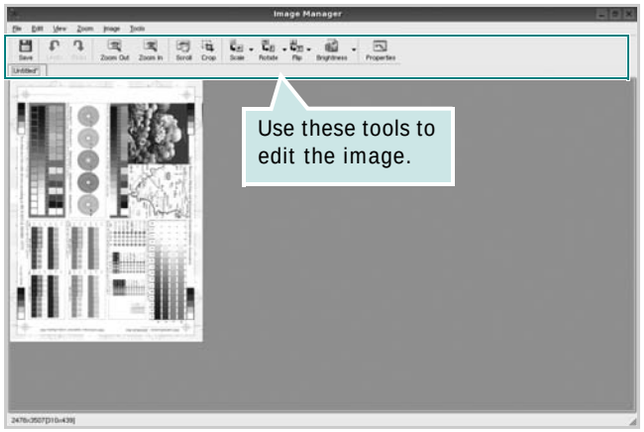
1 Select the setting you want to delete from the Job Type drop-down list.

2 Click **Delete**.

The setting is deleted from the list

Using the Image Manager

The Image Manager application provides you with menu commands and tools to edit your scanned image.



You can use the following tools to edit the image:

Tools	Function
Save	Saves the image.
Undo	Cancels your last action.
Redo	Restores the action you canceled.
Scroll	Allows you to scroll through the image.
Crop	Crops the selected image area.
Zoom Out	Zooms the image out.
Zoom In	Zooms the image in.
Scale	Allows you to scale the image size; you can enter the size manually, or set the rate to scale proportionally, vertically, or horizontally.
Rotate	Allows you to rotate the image; you can select the number of degrees from the drop-down list.
Flip	Allows you to flip the image vertically or horizontally.
Effect	Allows you to adjust the brightness or contrast of the image, or to invert the image.
Properties	Shows the properties of the image.

For further details about the Image Manager application, refer to the onscreen help.

8 Using Your Printer with a Macintosh

Your printer supports Macintosh systems with a built-in USB interface or 10/100 Base-TX network interface card. When you print a file from a Macintosh computer, you can use the driver by installing the PPD file.

NOTE: ***Some printers do not support a network interface. Make sure that your printer supports a network interface by referring to Printer Specifications in your Printer User's Guide.***

This chapter includes:

- **Installing printer driver for Macintosh**
- **Setting Up the Printer**
- **Printing**

Installing printer driver for Macintosh

ML-3050 only

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

Install the Printer driver

1. Make sure that you connect your printer to the computer. Turn on your computer and printer.
2. Insert the CD-ROM which came with your printer into the CD-ROM drive.
3. Double-click **CD-ROM icon** that appears on your Macintosh desktop.
4. Double-click the **Installer** folder.
5. Double-click the **Printer** folder.
6. Double-click the **Samsung SPL2 Installer** icon.
7. Enter the password and click **OK**.
8. The Samsung SPL Installer window opens. Click **Continue** and then click **Continue**.
9. Select **Easy Install** and click **Install**.
10. After the installation is finished, click **Quit**.

Uninstalling the Printer driver

Uninstall is required if you are upgrading the software, or if installation fails.

1. Insert the CD-ROM which came with your printer into the CD-ROM drive.
2. Double-click **CD-ROM icon** that appears on your Macintosh desktop.
3. Double-click the **Installer** folder.
4. Double-click the **Printer** folder.
5. Double-click the **Samsung SPL2 Installer** icon.
6. Enter the password and click **OK**.
7. The Samsung SPL Installer window opens. Click **Continue** and then click **Continue**.
8. Select **Uninstall** and then click **Uninstall**.
9. When the uninstallation is done, click **Quit**.

ML-3051N/ML-3050ND only

The PostScript driver CD-ROM that came with your machine provides you with the PPD file to use the PS driver, Apple LaserWriter driver, for printing on a Macintosh computer.

Also, it provides you with the Twain driver for scanning on a Macintosh computer.

1. Connect your machine to the computer using the USB cable or the Ethernet cable.
2. Turn on your computer and the machine.
3. Insert the PostScript driver CD-ROM which came with your machine into the CD-ROM drive.
4. Double-click the **Samsung_MFP** on your Macintosh desktop.
5. Double-click the **MAC_Installer** folder.

   Double-click the **Samsung_MFP Installer OSX** icon.
6. Click **Continue**.
7. Click **Install**.
8. After the installation is finished, click **Quit**.

Setting Up the Printer

Set up for your printer will be different depending on which cable you use to connect the printer to your computer—the network cable or the USB cable.

ML-3050 only

For a Network-connected Macintosh

NOTE: ***Some printers do not support a network interface. Before connecting your printer, make sure that your printer supports a network interface by referring to Printer Specifications in your Printer User's Guide.***

1. Follow the instructions on "Installing printer driver for Macintosh" on page 35 to install the PPD and Filter files on your computer.
2. Open **Print Setup Utility** from the **Utilities** folder.
3. Click **Add** on the **Printer List**.
4. Select the **IP Printing** tab.
5. Enter the printer's IP address in the **Printer Address** field.
6. Enter the queue name in the **Queue Name** field. If you cannot determine the queue name for your printer server, try using the default queue first.
7. Select **Samsung** in **Printer Model** and your printer in **Model Name**.
8. Click **Add**.
9. Your printer's IP address appears on the **Printer List**, and is set as the default printer.

For a USB-connected Macintosh

1. Follow the instructions on "Installing printer driver for Macintosh" on page 35 to install the PPD and Filter files on your computer.
2. Open **Print Setup Utility** from the **Utilities** folder.
3. Click **Add** on the **Printer List**.
4. Select the **USB** tab.
5. Select **Samsung** in **Printer Model** and your printer in **Model Name**.
6. Click **Add**.

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

ML-3051N / ML-3050ND only

For a Network-connected Macintosh

NOTE: ***Some printers do not support a network interface. Before connecting your printer, make sure that your printer supports a network interface by referring to Printer Specifications in your Printer User's Guide.***

1. Follow the instructions on "Installing printer driver for Macintosh" on page 35 to install the PPD file on your computer.
2. Open **Print Center** or **Printer Setup Utility** from the Utilities folder.
3. Click **Add** on the Printer List.
4. Select the **AppleTalk** tab.

   The name of your machine appears on the list. Select **SEC000xxxxxxxxx** from the printer box, where the **xxxxxxxxx** varies depending on your machine.
5. Click **Add**.
6. If Auto Select does not work properly, select **Samsung** in **Printer Model** and **your printer name** in **Model Name**.

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

For a USB-connected Macintosh

1. Follow the instructions on "Installing printer driver for Macintosh" on page 35 to install the PPD file on your computer.
2. Open **Print Center** or **Printer Setup Utility** from the Utilities folder.
3. Click **Add** on the Printer List.
4. Select the **USB** tab.
5. Select **your printer name** and click **Add**.
6. If Auto Select does not work properly, select **Samsung** in **Printer Model** and **your printer name** in **Model Name**.

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

Printing

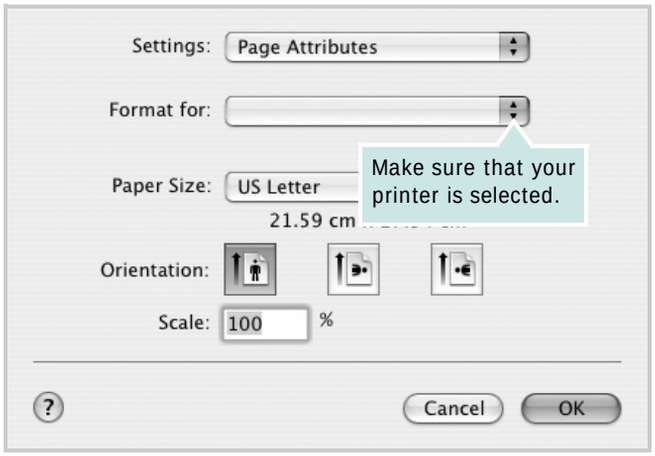
NOTES:

- The Macintosh printer's properties window that appears in this User's Guide may differ depending on the printer in use. However the composition of the printer properties window is similar.
- ***You can check your printer name in the supplied CD-ROM.***

Printing a Document

When you print with a Macintosh, you need to check the printer software setting in each application you use. Follow these steps to print from a Macintosh.

1. Open a Macintosh application and select the file you want to print.
2. Open the **File** menu and click **Page Setup** (**Document Setup** in some applications).
3. Choose your paper size, orientation, scaling, and other options and click **OK**.



▲ Mac OS 10.3

4. Open the **File** menu and click **Print**.
5. Choose the number of copies you want and indicate which pages you want to print.
6. Click **Print** when you finish setting the options.

Changing Printer Settings

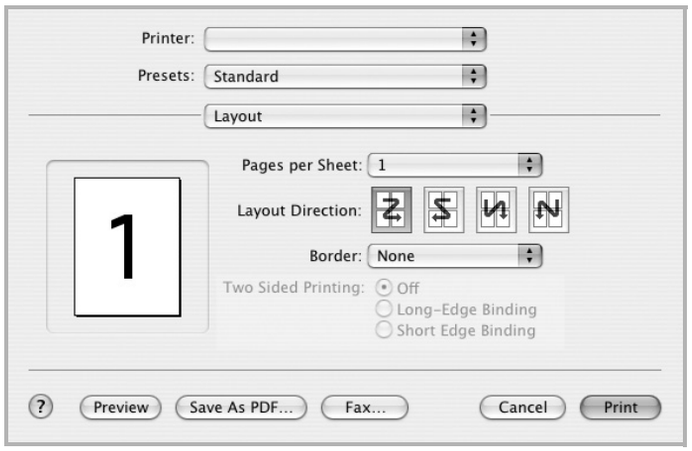
You can use advanced printing features when using your printer.

From your Macintosh application, select **Print** from the **File** menu. The printer name which appears in the printer properties window may differ depending on the printer in use. Except for the name, the composition of the printer properties window is similar.

Layout Setting

The **Layout** tab provides options to adjust how the document appears on the printed page. You can print multiple pages on one sheet of paper.

Select **Layout** from the **Presets** drop-down list to access the following features. For details, see "Printing Multiple Pages on One Sheet of Paper" on the next column.



▲ Mac OS 10.3

Printer Features Setting

The **Printer Features** tab provides options for selecting the paper type and adjusting print quality.

Select **Printer Features** from the **Presets** drop-down list to access the following features:

▲ Mac OS 10.3

Reverse Duplex (ML-3051ND only)

Allows you to select general print order compare to duplex print order.

Image Mode (ML-3051ND only)

Image Mode allows the user to enhance printouts. The available options are Normal and Text Enhance.

Fit to Page (ML-3051ND only)

This printer feature allows you to scale your print job to any selected paper size regardless of the digital document size. This can be useful when you want to check fine details on a small document.

Paper Type

Set **Type** to correspond to the paper loaded in the tray from which you want to print. This will let you get the best quality printout. If you load a different type of print material, select the corresponding paper type.

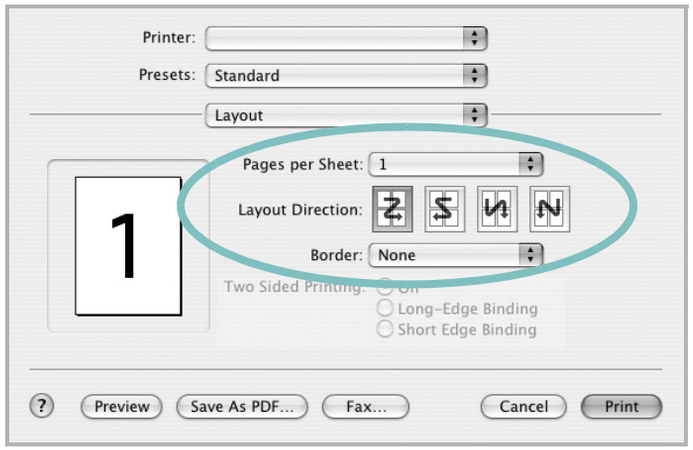
Resolution(Quality)

The Resolution options you can select may vary depending on your printer model. You can select the printing resolution. The higher the setting, the sharper the clarity of printed characters and graphics. The higher setting also may increase the time it takes to print a document.

Printing Multiple Pages on One Sheet of Paper

You can print more than one page on a single sheet of paper. This feature provides a cost-effective way to print draft pages.

1. From your Macintosh application, select **Print** from the **File** menu.
2. Select **Layout**.



▲ Mac OS 10.3

3. Select the number of pages you want to print on one sheet of paper on the **Pages per Sheet** drop-down list.
4. Select the page order from the **Layout Direction** option.

   To print a border around each page on the sheet, select the option you want from the **Border** drop-down list.
5. Click **Print**, and the printer prints the selected number of pages on one side of each page.

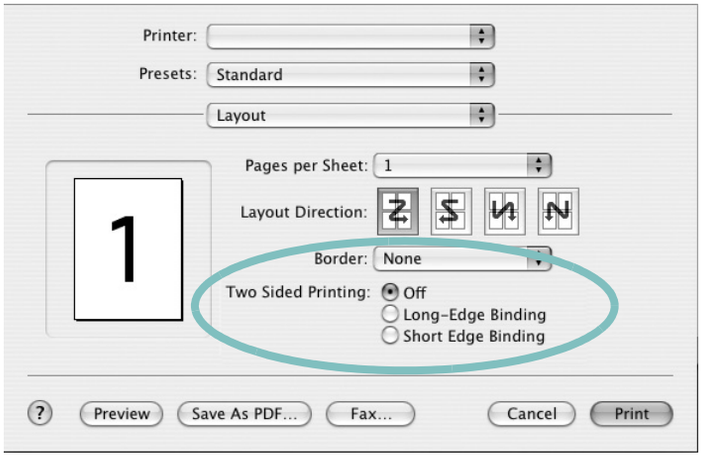
Duplex Printing (ML-3051ND only)

You can print on both sides of the paper. Before printing in the duplex mode, decide on which edge you will be binding your finished document. The binding options are:

Long-Edge Binding: Which is the conventional layout used in book binding.

Short-Edge Binding: Which is the type often used with calendars.

1. From your Macintosh application, select **Print** from the **File** menu.
2. Select the **Layout**.



▲ Mac OS 10.3

3. Select a binding orientation from **Two Sided Printing** option.
4. Click **Print** and the printer prints on both sides of the paper.

CAUTION: If you have selected duplex printing and then try to print multiple copies of a document, the printer may not print the document in the way you want. In case of "Collated copy" , if your document has odd pages, the last page of the first copy and the first page of the next copy will be printed on the front and back of one sheet. In case of "Uncollated copy", the same page will be printed on the front and back of one sheet. Therefore, if you need multiple copies of a document and you want those copies on both sides of the paper, you must print them one at a time, as separate print jobs.

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