User's Guide

CLX-330x/330xW Series
CLX-330xFN/330xFW Series

ADVANCED

This guide provides information about installation, advanced configuration, operation and troubleshooting on various OS environments.

Some features may not be available depending on models or countries.

BASIC

This guide provides information concerning installation, basic operation and troubleshooting on windows.

ADVANCED

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1. Software Installation

This chapter provides instructions for installing essential and helpful software for use in an environment where the machine is connected via a cable. A locally connected machine is a machine directly attached to your computer using the cable. If your machine is attached to a network, skip the following steps below and go on to installing a network connected machine's driver (see "Installing driver over the network" on page 151).

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- If you are a Windows OS user, refer to the Basic Guide for installing the machine's driver (see "Installing the driver locally" on page 30).
- Only use a USB cable no longer then 3 meter (118 inches).

Installation for Macintosh

1. Make sure that the machine is connected to your computer and powered on.
2. Insert the supplied software CD into your CD-ROM drive.
3. Double-click the CD-ROM icon that appears on your Macintosh desktop.
4. Double-click the **MAC_Installer** folder > **Installer OS X** icon.
5. Click **Continue**.
6. Read the license agreement and click **Continue**.
7. Click **Agree** to agree to the license agreement.
8. When the message that warns that all applications will close on your computer appears, click **Continue**.
9. Click **Continue** on the **User Options Pane**.
10. Click **Install**. All components necessary for machine operations will be installed.

    If you click **Customize**, you can choose individual components to install.
11. Enter the password and click **OK**.
12. Installing software requires you to restart your computer. Click **Continue Installation**.
13. After the installation is finished, click **Quit** or **Restart**.
14. Open the **Applications** folder > **Utilities** > **Print Setup Utility**.

    •For Mac OS X 10.5 -10.7, open the **Applications** folder > **System Preferences** and click **Print & Fax**.
15. Click **Add** on the **Printer List**.

    •For Mac OS X 10.5 -10.7, click the "**+**" folder icon; a display window will pop up.
16. Click **Default Browser** and find the USB connection.

    •For Mac OS X 10.5-10.7, click **Default** and find the USB connection.
17. For Mac OS X 10.4, if Auto Select does not work properly, select **Samsung** in **Print Using** and your machine name in **Model**.

    •For Mac OS X 10.5-10.7, if Auto Select does not work properly, select **Select a driver to use...** and your machine name in **Print Using**.

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

To install the fax driver:

a Open the **Applications** folder > **Samsung** > **Fax Queue Creator**.

b Your machine appears on the **Printer List**

c Select machine to use and click **Create** button

Reinstallation for Macintosh

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

1. Make sure that the machine is connected to your computer and powered on.
2. Insert the supplied software CD into your CD-ROM drive.
3. Double-click the CD-ROM icon that appears on your Macintosh desktop.
4. Double-click the **MAC_Installer** folder > **Uninstaller OS X** icon.
5. Enter the password and click **OK**.
6. When the uninstall is done, click **OK**.

If a machine has already been added, delete it from the **Print Setup Utility** or **Print & Fax**.

Installation for Linux

You need to download Linux software packages from the Samsung website to install the printer software (http://www.samsung.com > find your product > Support or Downloads).

Installing the Unified Linux Driver

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

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

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

3 From the Samsung website, download the Unified Linux Driver package to your computer.

4 Right-click the **Unified Linux Driver** package and extract the package.

5 Double click **cdroot** > **autorun**.

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

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

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

Reinstallation for Linux

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

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

   You must log in as a super user (root) to uninstall the printer driver. If you are not a super user, ask your system administrator.
3. Open the Terminal program. When the Terminal screen appears, type in the following.

   [root@localhost root]#cd /opt/Samsung/mfp/uninstall/

   [root@localhost uninstall]#./uninstall.sh
4. Click **Next**.
5. Click **Finish**.

2. Using a Network-Connected Machine

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

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Supported optional devices and features may differ according to your model (see "Features by models" on page 7).

Useful network programs

There are several programs available to setup the network settings easily in a network environment. For the network administrator especially, managing several machines on the network is possible.

- Before using the programs below, set the IP address first.
- Some features and optional goods may not be available depending on model or country (see "Features by models" on page 7).

SyncThru™ Web Service

The web server embedded on your network machine allows you to do the following tasks (see "Using SyncThru™ Web Service" on page 258).

- Check the supplies information and status.
- Customize machine settings.
- Set the email notification option. When you set this option, the machine status (toner cartridge shortage or machine error) will be sent to a certain person's email automatically.
- Configure the network parameters necessary for the machine to connect to various network environments.

SyncThru™ Web Admin Service

Web-based machine management solution for network administrators. SyncThru™ Web Admin Service provides you with an efficient way of managing network devices and lets you remotely monitor and troubleshoot network machines from any site with corporate internet access.

- Download this program from http://solution.samsungprinter.com.

SetIP wired network setup

This utility program allows you to select a network interface and manually configure the IP addresses for use with the TCP/IP protocol.

- See "IPv4 configuration using SetIP (Windows)" on page 148.
- See "IPv4 configuration using SetIP (Macintosh)" on page 149.
- See "IPv4 configuration using SetIP (Linux)" on page 150.

- The machine that does not support the network port, it will not be able to use this feature (see "Rear view" on page 22).
- TCP/IPv6 is not supported by this program.

Wired network setup

Printing a network configuration report

You can print **Network Configuration Report** from the machine's control panel that will show the current machine's network settings. This will help you to set up a network.

Press the (**Menu**) button on the control panel and select **Network** > **Network Conf.** (**Network Configuration**).

Using this **Network Configuration Report**, you can find your machine's MAC address and IP address.

For example:

- MAC Address: 00:15:99:41:A2:78
- IP Address: 169.254.192.192

Setting IP address

- The machine that does not support the network interface, it will not be able to use this feature (see "Rear view" on page 22).
- TCP/IPv6 is not supported by this program.

First, you have to set up an IP address for network printing and managements. In most cases a new IP address will be automatically assigned by a DHCP (Dynamic Host Configuration Protocol) server located on the network.

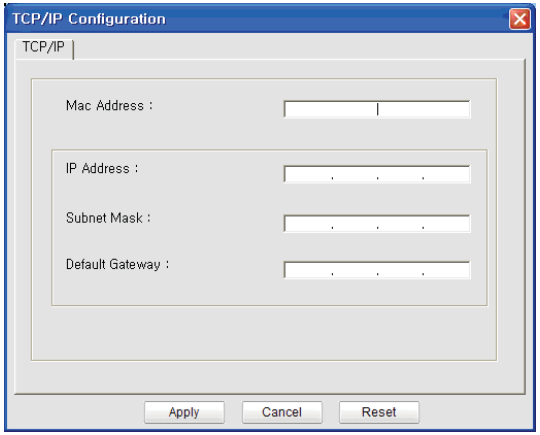
IPv4 configuration using SetIP (Windows)

Before using the SetIP program, disable the computer firewall from **Control Panel** > **Security Center** > **Windows Firewall**.

1. Install this program from the supplied CD-ROM by double-click **Application** > **SetIP** > **Setup.exe**.
2. Follow the instructions in the installation window.
3. Connect your machine to the network with a network cable.
4. Turn on the machine.
5. From the Windows **Start** menu, select **All Programs** > **Samsung Printers** > **SetIP** > **SetIP**.
6. Click the icon (third from left) in the SetIP window to open the TCP/IP configuration window.

Wired network setup

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



Find the machine's MAC address from the **Network Configuration Report** (see "Printing a network configuration report" on page 148) and enter it without the colons. For example, 00:15:99:29:51:A8 becomes 0015992951A8.

8 Click **Apply**, and then click **OK**. The machine will automatically print the **Network Configuration Report**. Confirm that all the settings are correct.

IPv4 configuration using SetIP (Macintosh)

Before using the SetIP program, disable the computer firewall from **System Preferences** > **Security** > **Firewall**.

The following instructions may vary from your model.

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

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

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

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

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

Find the machine's MAC address from the **Network Configuration Report** (see "Printing a network configuration report" on page 148) and enter it without the colons. For example, 00:15:99:29:51:A8 becomes 0015992951A8.

6 Select **Apply**, then **OK**, and **OK** again.

7 Quit **Safari**.

IPv4 configuration using SetIP (Linux)

Before using the SetIP program, disable the computer firewall from **System Preferences** or **Administrator**.

The following instructions may vary from your model or operating systems.

1 Open /**opt**/**Samsung**/**mfp**/**share**/**utils**/.

2 Double-click the **SetIPApplet.html** file.

3 Click to open the TCP/IP configuration window.

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

Find the machine's MAC address from the **Network Configuration Report** (see "Printing a network configuration report" on page 148) and enter it without the colons. For example, 00:15:99:29:51:A8 becomes 0015992951A8.

5 The machine will automatically print the **Network Configuration Report**.

Installing driver over the network

- Some features and optional goods may not be available depending on model or country (see "Features by models" on page 7).
- The machine that does not support the network interface, it will not be able to use this feature (see "Rear view" on page 22).
- Selecting **Custom Installation** allows you to choose which programs to install. When the installation window appears, select **Custom Installation**. You can select the XPS printer driver or other software applications in the **Select Software** window.

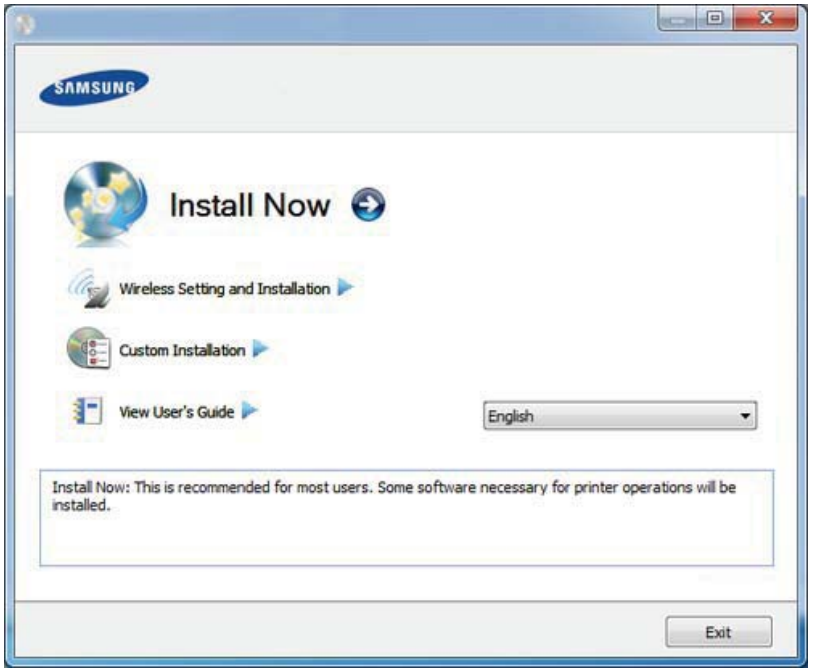
Windows

1 Make sure that the machine is connected to the network and powered on. Also, your machine's IP address should have been set (see "Setting IP address" on page 148).

If the "**Found New Hardware Wizard**" appears during the installation procedure, click **Cancel** to close the window.

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

3 Select **Install Now**.



The **Custom Installation** allows you to select the machine's connection and choose individual components to install. Follow the instructions on the window.

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

The program searches for the machine.

Installing driver over the network

If your machine is not found on the network or locally, an error message appears. Select the option you want and click **Next**.

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

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

6 Follow the instructions in the installation window.

Silent installation Mode

Silent installation mode is an installation method that does not require any user intervention. Once you start the installation, the machine driver and software are automatically installed on you computer. You can start the silent installation by typing **/s** or **/S** in the command window.

Command-line Parameters

Following table shows commands that can be used in the command window.

Following command-line are effective and operated when command is used with **/s** or **/S**. But **/h**, **/H** or **/?** are exceptional commands that can be operated solely.

Command- line	Definition	Description
/s or /S	Starts silent installation.	Installs machine drivers without prompting any UIs or user intervention.
/p”<port name>” or /P”<port name>”	Specifies printer port. Network Port will be created by use of Standard TCP/IP Port monitor. For local port, this port must exist on system before being specified by command.	Printer port name can be specified as IP address, hostname, USB local port name or IEEE1284 port name. For example: • /p”xxx.xxx.xxx.xxx” in where, “xxx.xxx.xxx.xxx” means IP address for network printer. / p”USB001”, /P”LPT1:”, / p”hostname”

Installing driver over the network

Command- line	Definition	Description
/a"<dest_path>" or /A"<dest_path>"	Specifies destination path for installation. The destination path should be a fully qualified path.	Since machine drivers should be installed on the OS specific location, this command applies to only application software.
/i"<script filename>" or /I"<script filename>"	Specifies customized install script file for custom operation. The script filename should be a fully qualified filename.	Customized script file can be assigned for customized silent installation. This script file can be created or modified through provided installer customizing utility or by text editor. This customized script file is prior than default installer setting in setup package but not prior than command-line parameters.

Command- line	Definition	Description
/n"<Printer name>" or /N"<Printer name>"	Specifies printer name. Printer instance shall be created as specified printer name.	With this parameter, you can add printer instances as your wishes.
/nd or /ND	Commands not to set the installed driver as a default machine driver.	It indicates installed machine driver will not be the default machine driver on your system if there are one or more printer drivers installed. If there is no installed machine driver on your system, then this option won't be applied because Windows OS will set installed printer driver as a default machine driver.
/x or /X	Uses existing machine driver files to create printer instance if it is already installed.	This command provides a way to install a printer instance that uses installed printer driver files without installing an additional driver.

Installing driver over the network

Command- line	Definition	Description
/up"<printer name>" or /UP"<printer name>"	Removes only specified printer instance and not the driver files.	This command provides a way to remove only specified printer instance from your system without effecting other printer drivers. It will not remove printer driver files from your system.
/d or /D	Uninstalls all device drivers and applications from your system.	This command will remove all installed device drivers and application software from your system.
/v"<share name>" or /V"<share name>"	Shares installed machine and add other available platform drivers for Point & Print.	It will install all supported Windows OS platform's machine drivers to system and share it with specified <share name> for point and print.
/o or /O	Opens **Printers and Faxes** folder after installation.	This command will open **Printers and Faxes** folder after the silent installation.
/f"<log filename>" or /F"<log filename>"	Specifies log filename. The default log file is created in the system temp folder if not specified.	It will create a log file to a specified folder.
/h, /H or /?	Shows Command-line Usage.	

Macintosh

1. Make sure that the machine is connected to your network and powered on.
2. Insert the supplied software CD into your CD-ROM drive.
3. Double-click the CD-ROM icon that appears on your Macintosh desktop.
4. Double-click the **MAC_Installer** folder > **Installer OS X** icon.
5. Click **Continue**.
6. Read the license agreement and click **Continue**.
7. Click **Agree** to agree to the license agreement.
8. When the message which warns that all applications will close on your computer appears, click **Continue**.
9. Click **Continue** on the **User Options Pane**.

Installing driver over the network

If you have not set the IP address yet, click Set IP address and refer to "IPv4 configuration using SetIP (Macintosh)" on page 149. If you want to set the wireless setting, refer to "Setup using Macintosh" on page 176.

10 Click **Install**. All components necessary for machine operations will be installed.

If you click **Customize**, you can choose individual components to install.

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

12 Installing software requires you to restart your computer. Click **Continue Installation**.

13 After the installation is finished, click **Quit** or **Restart**.

14 Open the **Applications** folder > **Utilities** > **Print Setup Utility**.

•For Mac OS X 10.5-10.7, open the **Applications** folder > **System Preferences** and click **Print & Fax**.

15 Click **Add** on the **Printer List**.

•For Mac OS X 10.5-10.7, click the "**+**" icon. A display window will pop up.

16 For Mac OS X 10.4, click **IP Printer**.

•For Mac OS X 10.5-10.7, click **IP**.

17 Select **HP Jetdirect - Socket** in **Protocol**.

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

18 Enter the machine's IP address in the **Address** input field.

19 Enter the queue name in the **Queue** input field. If you cannot determine the queue name for your machine server, try using the default queue first.

20 For Mac OS X 10.4, if Auto Select does not work properly, select **Samsung** in **Print Using** and your machine name in **Model**.

•For Mac OS X 10.5-10.7, if Auto Select does not work properly, choose **Select Printer Software** and your machine name in **Print Using**.

21 Click **Add**.

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

To install the fax driver:

a Open the **Applications** folder > **Samsung** > **Fax Queue Creator**.

b Your machine appears on the **Printer List**.

c Select machine to use and Click **Create** button.

Installing driver over the network

Linux

You need to download Linux software packages from the Samsung website to install the printer software (http://www.samsung.com > find your product > Support or Downloads).

Install the Linux driver and add network printer

1. Make sure that the machine is connected to your network and powered on. Also, your machine's IP address should have been set.
2. Download the Unified Linux Driver package from the Samsung website.
3. Extract the UnifiedLinuxDriver.tar.gz file and open the new directory.
4. Double-click the **cdroot** > **autorun**
5. The Samsung installer window opens. Click **Next**.
6. The add printer wizard window opens. Click **Next**.
7. Select network printer and click **Search** button.
8. The machine's IP address and model name appears on list field.
9. Select your machine and click **Next**.
10. Input the printer description and **Next**.
11. After the machine is added, click **Finish**.
12. When installation is done, click **Finish**.

Add a network printer

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

IPv6 configuration

IPv6 is supported properly only in Windows Vista or higher.

- Some features and optional goods may not be available depending on model or country (see "Features by models" on page 7 or "Menu overview" on page 33).
- If the IPv6 network seems to not be working, set all the network setting to the factory defaults and try again using **Clear Setting**.

The machine supports the following IPv6 addresses for network printing and managements.

- **Link-local Address**: Self-configured local IPv6 address (Address starts with FE80).
- **Stateless Address**: Automatically configured IPv6 address by a network router.
- **Stateful Address**: IPv6 address configured by a DHCPv6 server.
- **Manual Address**: Manually configured IPv6 address by a user.

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

From the control panel

Activating IPv6

1. Press the (**Menu**) button on the control panel.
2. Press **Network** > **TCP/IP (IPv6)** > **IPv6 Activate**.
3. Select **On** and press **OK**.
4. Turn the machine off and turn it on again.

When you install the printer driver, do not configure both IPv4 and IPv6. We recommend to configure either IPv4 or IPv6 (see "Installing driver over the network" on page 151).

DHCPv6 address configuration

If you have a DHCPv6 server on your network, you can set one of the following options for default dynamic host configuration.

1. Press the (**Menu**) button on the control panel.
2. Press **Network** > **TCP/IP (IPv6)** > **DHCPv6 Config**.

IPv6 configuration

3 Press **OK** to select the required value you want.

- **DHCPv6 Addr.**: Always use DHCPv6 regardless of router request.
- **DHCPv6 Off**: Never use DHCPv6 regardless of router request.
- **Router**: Use DHCPv6 only when requested by a router.

From the SyncThru™ Web Service

Activating IPv6

1 Access a web browser, such as Internet Explorer, from Windows. Enter the machine IP address (http://xxx.xxx.xxx.xxx) in the address field and press the Enter key or click **Go**.

2 If it's your first time logging into **SyncThru™ Web Service** you need to log-in as an administrator. Type in the below default ID and password. We recommend you to change the default password for security reasons.

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

3 When the **SyncThru™ Web Service** window opens, move the mouse cursor over the **Settings** of the top menu bar and then click **Network Settings**.

4 Click **TCP/IPv6** on the left pane of the website.

5 Check the **IPv6 Protocol** check box to activate IPv6.

6 Click the **Apply** button.

7 Turn the machine off and turn it on again.

- You can also set the DHCPv6.
- To manually set the IPv6 address:
  Check the **Manual Address** check box. Then, the **Address/Prefix** text box is activated. Enter the rest of the address (e.g.,:3FFE:10:88:194::**AAAA**. "A" is the hexadecimal 0 through 9, A through F).

IPv6 address configuration

1 Start a web browser, such as Internet Explorer, that supports IPv6 addressing as a URL.

2 Select one of the IPv6 addresses (**Link-local Address**, **Stateless Address**, **Stateful Address**, **Manual Address**) from **Network Configuration Report** (see "Printing a network configuration report" on page 148).

- **Link-local Address**: Self-configured local IPv6 address (Address starts with FE80).
- **Stateless Address**: Automatically configured IPv6 address by a network router.
- **Stateful Address**: IPv6 address configured by a DHCPv6 server.

IPv6 configuration

- **Manual Address**: Manually configured IPv6 address by a user.

3 Enter the IPv6 addresses (e.g.,: http://[FE80::215:99FF:FE66:7701]).

Address must be enclosed in '[ ]' brackets.

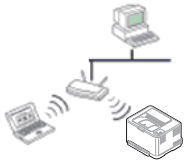
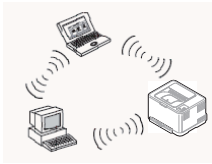
Wireless network setup

- Make sure your machine supports wireless networking. Wireless networking may not be available depending on the model (see "Features by models" on page 7).
- If the IPv6 network seems to not be working, set all the network settings to the factory defaults and try again using **Clear Setting**.

Getting started

Understanding your network type

Typically, you can only have one connection between your computer and the machine at a time.

	**Infrastructure mode** This is an environment generally used for homes and SOHOs (Small Office/ Home Office). This mode uses an access point to communicate with the wireless machine.
	**Ad hoc mode** This mode does not use an access point. The wireless computer and wireless machine communicate directly.

Wireless network name and network key

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

Wireless network setup

Introducing wireless set up methods

You can set wireless settings either from the machine or the computer. Choose the setting method from the below table.

Some wireless network installation types may not be available depending on the model or country.

Set up method	Connecting method	Description & Reference
From the computer	Access point via USB cable (recommended) ( )	• Windows user, see "Access point via USB cable" on page 163. • Macintosh user, see "Access point via USB cable" on page 176.
	Access point via WPS button (without a USB cable connection) (,)	• Windows user, see "Access point via WPS button (without a USB cable connection)" on page 167. • Macintosh user, see "Setting the access point using the WPS button" on page 180.
	Ad hoc via USB cable ( )	• Windows user, see "Ad hoc via USB cable" on page 169. • Macintosh user, see "Ad hoc via USB cable" on page 182.
	Using a network cable	• See "Using a network cable" on page 184.

Wireless network setup

Set up method	Connecting method	Description & Reference
From the machine's control panel 	Using the WPS ( )	• See "Machines with a display screen" on page 173. • See "Machines without a display screen" on page 174.
	Using the menu button ( )	• See "Using the menu button" on page 175.
Other set up methods	Setting the Wi-Fi Direct for mobile printing	• See "Setting up Wi-Fi Direct" on page 188.

If problems occur during wireless set up or driver installation, refer to the troubleshooting chapter (see "Troubleshooting" on page 189).

Setup using Windows

Shortcut to the **Wireless Setting** program without the CD: If you have installed the printer driver once, you can access the **Wireless Setting** program without the CD. From the Start menu, select **Programs** or **All Programs** > **Samsung Printers** > **your printer driver name** > **Wireless Setting Program**.

Wireless network setup

Access point via USB cable

Items to prepare

- Access point
- Network-connected computer
- Software CD that was provided with your machine
- A machine installed with a wireless network interface
- USB cable

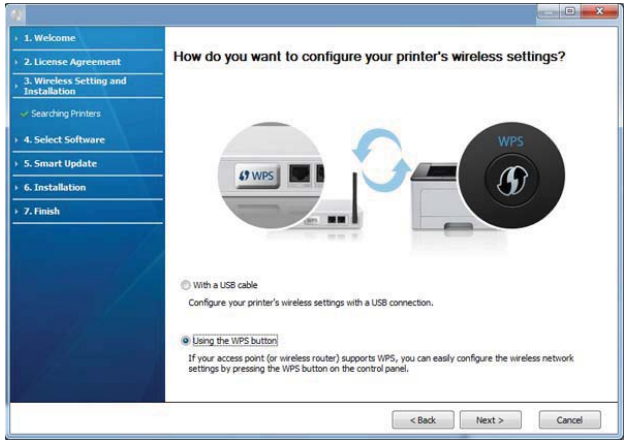
Creating the infrastructure network

1. Check whether the USB cable is connected to the machine.
2. Turn on your computer, access point, and machine.
3. Insert the supplied software CD into your CD-ROM drive.
4. Select the **Wireless Setting and Installation** option.
5. Read the **License Agreement**, and select **I accept the terms of the License Agreement**. Then, click **Next**.
6. The software searches the wireless network.

   If the software has failed to search the network, check if the USB cable is connected properly between the computer and machine, and follow the instructions in the window.

- If wireless network set up has been set before, the **Wireless Network Setting Information** window appears.

  If you want to reset the wireless settings, check the check box and click **Next**.
- For models that support the WPS button (without a USB cable connection), the window shown below will appear.

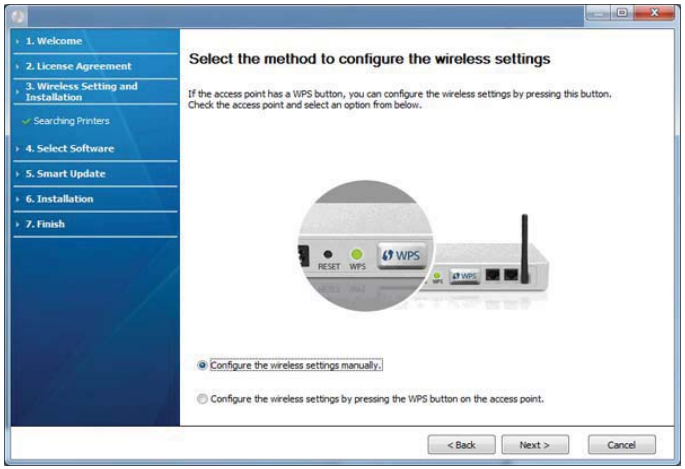


-**With a USB Cable**: Connect the USB cable and click Next, then go to step 7.

-**Using the WPS button**: See "Access point via WPS button (without a USB cable connection)" on page 167.

Wireless network setup

7 Select the method to use from the wireless set up method window.



•**Configure the wireless settings manually.**: Go to step 8.

•**Configure the wireless settings by pressing the WPS button on the access point.**: Connect to the wireless network by press the WPS button on the access point (or wireless router).

-Follow the instructions in the window. When you are done configuring the wireless network settings, go to step 11.

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

If you cannot find the network name you want to choose, or if you want to set the wireless configuration manually, click **Advanced Setting**.

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

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

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

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

Wireless network setup

The wireless network security window appears when the access point has security settings.

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

- **WEP**

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

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

- **WPA**

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

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

9 The window shows the wireless network settings and checks if the settings are correct. Click **Next**.

•For the DHCP method

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

•For the Static method

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

For example,

If the computer's network information is as shown below,

-IP address: 169.254.133.42

-Subnet Mask: 255.255.0.0

Then, the machine's network information should be as follows:

-IP address: 169.254.133.**43**

-Subnet Mask: 255.255.0.0 (Use the computer's subnet mask.)

-Gateway: 169.254.133.**1**

Wireless network setup

10 When the window that tells you that the network cable connection is confirmed appears, disconnect the network cable and click **Next**.

If the network cable is connected, it may have trouble finding the machine when configuring the wireless network.

11 Wireless network setting is completed. To print from a Wi-Fi Direct supported mobile device, set the Wi-Fi Direct Option (see "Setting up Wi-Fi Direct" on page 188).

Wi-Fi Direct Option:

- Wi-Fi Direct option appears on the screen only if your printer supports this feature.
- Can start to build Wi-Fi Direct by using Samsung Easy Printer Manager (see "Setting up Wi-Fi Direct" on page 188).
- **Network Name(SSID)**: The default Network Name is the model name and the maximum length is 22 characters (not including "Direct-xx-").
- **Network Key** is the numeric string, and the size is 8 ~ 64 characters.

12 When the wireless network set up is completed, disconnect the USB cable between the computer and machine. Click **Next**.

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

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

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

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

Otherwise, just click **Next** and go to step 18.

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

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

18 If you want to register your machine with the Samusng web site and receive useful information, click **On-line Registration**. If not, click **Finish**.

Wireless network setup

Access point via WPS button (without a USB cable connection)

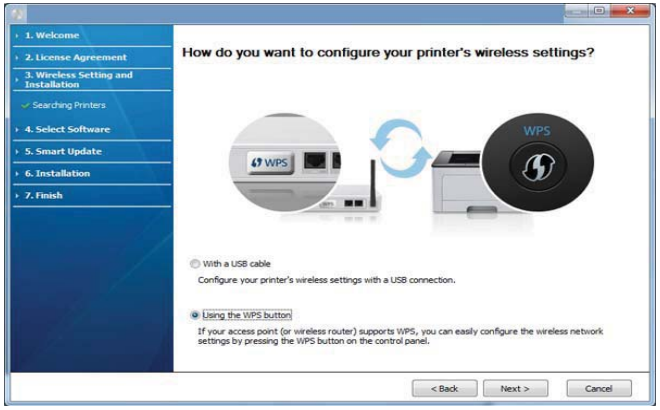
For models that have a WPS button, you can set the wireless network using the WPS button (without a USB connection) and access point (or a router) WPS button.

Items to prepare

- Access point (or wireless router)
- Network-connected computer
- Software CD that was provided with your machine
- The machine installed with a wireless network interface

Creating the infrastructure network

1. Turn on your computer, access point, and machine.
2. Insert the supplied software CD into your CD-ROM drive.
3. Select the **Wireless Setting and Installation** option.
4. Read the **License Agreement**, and select **I accept the terms of the License Agreement**. Then, click **Next**.
5. Select **Using the WPS button** and click **Next**.



- For models that support WPS button, the above window appears.
- If your machine is connected with a USB cable, the above window does not appear. Disconnect the USB cable if you want to set up the wireless network using the WPS button.
- If you want to set up the wireless network using the USB cable, refer to "Access point via USB cable" on page 163.

6. The next window asks you to check if your access point (or wireless router) supports WPS or not.

   If the access point (or wireless router) has a WPS button, select **Yes** and click **Next**.

Wireless network setup

7 Follow the instructions on the window to set up the wireless network.

•For models with a display screen, follow the steps below.

aPress and hold the (WPS) button on the control panel for about 2-4 seconds.

The machine waits up to 2 minutes for the WPS button on the access point (or a router) to be pressed.

bPress the **WPS (PBC)** button on the access point (or wireless router).

The messages are displayed on the display screen in the order below:

-**Connecting:** The machine is connecting to the access point (or wireless router).

-**Connected:** When the machine is successfully connected to the wireless network, the WPS LED light stays on.

-**SSID Type:** After completing the wireless network connection process, the AP's SSID information appears on the display.

•For models without a display screen, follow the steps below.

aPress and hold the (WPS) button on the control panel for about 2 - 4 seconds until the status LED blinks quickly.

The machine starts connecting to the wireless network. The LED blinks slowly for up to two minutes until you press the PBC button on the access point (or wireless router).

bPress the **WPS (PBC)** button on the access point (or wireless router).

-The light blinks fast on the WPS LED while it is connecting to the access point (or wireless router).

-When the machine is successfully connected to the wireless network, the WPS LED light stays on.

8 The **Wireless Network Setting Complete** window appears. Click **Next**.

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

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

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

Wireless network setup

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

Otherwise, just click **Next** and go to step 14.

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

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

14 If you want to register your machine with the Samusng web site and receive useful information, click **On-line Registration**. If not, click **Finish**.

Ad hoc via USB cable

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

Items to prepare

- Network-connected computer
- Software CD that was provided with your machine
- A machine installed with a wireless network interface
- USB cable

Creating the ad hoc network in Windows

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

2 Turn on your computer and the wireless network machine.

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

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

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

6 The software searches the wireless network.

If the software has failed to search the network, check if the USB cable is connected properly between the computer and machine, and follow the instructions in the window.

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

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

Then, click **Next**.

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

Wireless network setup

If you want to change the ad hoc settings, click the **Advanced Setting** button.

- **Enter the wireless Network Name:** Enter the SSID name you want (SSID is case-sensitive).
- **Operation Mode:** Select ad hoc.
- **Channel:** Select the channel. (**Auto Setting** or 2412 MHz to 2467 MHz).
- **Authentication:** Select an authentication type.

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

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

The wireless network security window appears when the ad hoc network has security enabled.

Select **Open System** or **Shared Key** for the authentication and click **Next**.

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

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

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

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

- **For the DHCP method**

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

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

  For example,

  If the computer's network information is as shown follows:

  -IP address: 169.254.133.42

  -Subnet Mask: 255.255.0.0

  Then, the machine's network information should be as below:

  -IP address: 169.254.133.**43**

  -Subnet Mask: 255.255.0.0 (Use the computer's subnet mask.)

  -Gateway: 169.254.133.**1**

Wireless network setup

9 The **Wireless Network Setting Complete** window appears. Click **Next**.

10 When the wireless network settings are completed, disconnect the USB cable between the computer and machine. Click **Next**.

If the **Change PC Network Setting** window appears, follow the steps in the window.

Click **Next** if you are finished with the computer's wireless network settings.

If you set the computer's wireless network to DHCP, it will take several minutes to receive the IP address.

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

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

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

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

Otherwise, just click **Next** and go to step 16.

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

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

16 If you want to register your machine with the Samusng web site and receive useful information, click **On-line Registration**. If not, click **Finish**.

Wireless network setup

Using the WPS button

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

- If you want to use the wireless network using the infrastructure mode, make sure that the network cable is disconnected from the machine. Using the **WPS (PBC)** button or entering the PIN from the computer to connect to the access point (or wireless router) varies depending on the access point (or wireless router) you are using. Refer to the user's guide of the access point (or wireless router) you are using.
- When using the WPS button to set the wireless network, security settings may change. To prevent this, lock the WPS option for the current wireless security settings. The option name may differ depending on the access point (or wireless router) you are using.

Items to prepare

- Check if the access point (or wireless router) supports Wi-Fi Protected Setup™ (WPS).
- Check if your machine supports Wi-Fi Protected Setup™ (WPS).
- Networked computer (PIN mode only)

Choosing your type

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

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

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

Factory default in your machine is **PBC** mode, which is recommended for a typical wireless network environment.

You can change the WPS mode in control panel ((**Menu**) > **Network** > **Wireless** > **OK** > **WPS Setting**).

Wireless network setup

Machines with a display screen

Connecting in PBC mode

1 Press and hold the (WPS) button on the control panel for more than 2 seconds.

The machine starts waiting for up to two minutes until you press the WPS (PBC) button on the access point (or wireless router).

2 Press the **WPS (PBC)** button on the access point (or wireless router).

The messages are displayed on the display screen in the order below:

aConnecting: The machine is connecting to the access point (or wireless router).

bConnected: When the machine is successfully connected to the wireless network, the WPS LED light stays on.

cAP SSID: After completing the wireless network connection process, the AP's SSID information appears on the display.

Connecting in PIN mode

1 Press and hold the (WPS) button on the control panel for more than 2 seconds.

2 The eight-digit PIN appears on the display.

You need to enter the eight-digit PIN within two minutes on the computer that is connected to the access point (or wireless router).

The messages are displayed on the display screen in the order below:

aConnecting: The machine is connecting to the wireless network.

bConnected: When the machine is successfully connected to the wireless network, the WPS LED light stays on.

cSSID Type: After completing the wireless network connection process, the AP's SSID information is displayed on the LCD display.

Wireless network setup

Machines without a display screen

Connecting in PBC mode

1 Press and hold the (WPS) button on the control panel for about 2 - 4 seconds until the status LED blinks quickly.

The machine starts connecting to the wireless network. The LED blinks slowly for up to two minutes until you press the PBC button on the access point (or wireless router).

2 Press the **WPS (PBC)** button on the access point (or wireless router).

a The light blinks fast on the WPS LED. The machine is connecting to the access point (or wireless router).

b When the machine is successfully connected to the wireless network, the WPS LED light stays on.

Connecting in PIN mode

1 The network configuration report, including PIN, must be printed (see "Printing a network configuration report" on page 148).

In ready mode, press and hold the (**Cancel** or **Stop/Clear**) button on the control panel for about 5 seconds. You can find your machine's PIN.

2 Press and hold the (WPS) button on the control panel for more than 4 seconds until the status LED stays on.

The machine starts connecting to the access point (or wireless router).

3 You need to enter the eight-digit PIN within two minutes on the computer that is connected to the access point (or wireless router).

The LED blinks slowly for up to two minutes until you enter the eight-digit PIN.

The WPS LED blinks in the order below:

a The light blinks fast on the WPS LED. The machine is connecting to the access point (or wireless router).

b When the machine is successfully connected to the wireless network, the WPS LED light stays on.

Re-connecting to a network

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

In the following cases, the machine automatically re-connects to the wireless network:

- The machine is turned off and on again.
- The access point (or wireless router) is turned off and on again.

Wireless network setup

Canceling the connection process

To cancel the wireless network connection when the machine is connecting to the wireless network, press and release the ⊗ (**Cancel** or **Stop/Clear**) on the control panel. **You need to wait 2 minutes to re-connect to the wireless network.**

Disconnecting from a network

To disconnect the wireless network connection, press the (WPS) button on the control panel for more than two seconds.

- **When the Wi-Fi network is in idle mode:** The machine is immediately disconnected from the wireless network and the WPS LED turns off.
- **When the Wi-Fi network is being used:** While the machine waits until the current job is finished, the light blinks fast on the WPS LED. Then, the wireless network connection is automatically disconnected and the WPS LED turns off.

Using the menu button

Some menus may not appear in the display depending on options or models. If so, it is not applicable to your machine (see "Menu overview" on page 33).

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

After completing the wireless network connection, you need to install a machine driver to print from an application (see "Installing driver over the network" on page 151).

1. Press the (**Menu**) button on the control panel.
2. Press **Network** > **Wireless** > **WLAN Settings**.

Wireless network setup

3 Press the **OK** to select the setup method you want.

•**Wizard** (recommended)**:** In this mode, the setup is automatic. The machine will display a list of available networks from which to choose. After a network is chosen then printer will prompt for the corresponding security key.

•**Custom:** In this mode, users can give or edit manually their own SSID , or choose the security option in detail.

Setup using Macintosh

Items to prepare

- Access point
- Network-connected computer
- Software CD that was provided with your machine
- A machine installed with a wireless network interface
- USB cable

Access point via USB cable

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

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

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

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

5 Double-click the **MAC_Installer** folder > **Installer OS X** icon.

6 Click **Continue**.

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

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

9 When the message that warns that all applications will close on your computer appears, click **Continue**.

10 Click **Wireless Network Setting** button on the **User Options Pane**.

11 The software searches the wireless network.

If the software has failed to search the network, check if the USB cable is connected properly between the computer and machine, and follow the instructions in the window.

Wireless network setup

- If wireless network setting has been set before, **Wireless Network Setting Information** window appears.

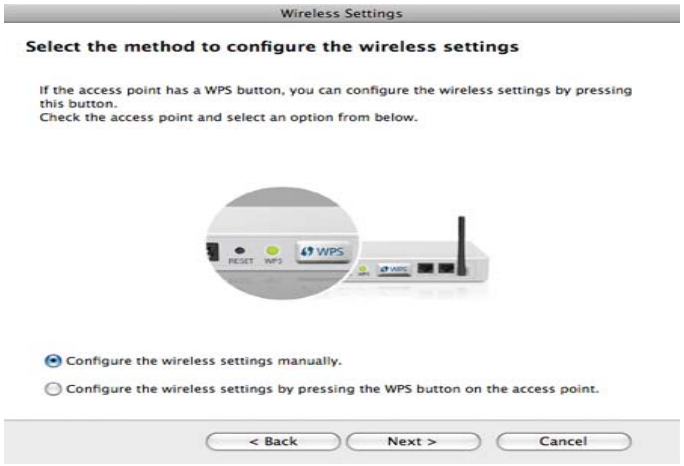
  If you want to reset the wireless settings, check the check box and click **Next**.

- For models that support the WPS button (without a USB cable connection), the window shown below will appear.

-**With a USB Cable**: Connect the USB cable and click Next, then go to step 7.

-**Using the WPS Button**: See "Access point via WPS button (without a USB cable connection)" on page 167.

12 Select the method to use from the wireless set up method window.



•**Configure the wireless settings manually.**: Go to step 13.

•**Configure the wireless settings by pressing the WPS button on the access point.**: Connect to the wireless network by press the WPS button on the access point (or a wireless router).

-Follow the instructions in the window. When you are done setting the wireless network settings, go to step 16.

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

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

- **Enter the wireless Network Name:** Enter the SSID of the access point (SSID is case-sensitive).
- **Operation Mode:** Select **Infrastructure**.

Wireless network setup

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

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

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

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

The wireless network security window appears when the access point has security enabled.

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

- **WEP**

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

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

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

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

Wireless network setup

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

•For the DHCP method

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

•For the Static method

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

For example:

If the computer's network information is shown as follows:

-IP address: 169.254.133.42

-Subnet Mask: 255.255.0.0

Then, the machine's network information should be as shown below:

-IP address: 169.254.133.**43**

-Subnet Mask: 255.255.0.0 (Use the computer's subnet mask.)

-Gateway: 169.254.133.**1**

15 When the window that tells you that the network cable connection is confirmed appears, disconnect the network cable and click **Next**.

If the network cable is connected, it may have trouble finding the machine when configuring the wireless network.

16 Wireless network setting is completed. To print from a Wi-Fi Direct supported mobile device, set the Wi-Fi Direct Option (see "Setting up Wi-Fi Direct" on page 188).

Wi-Fi Direct Option:

- Wi-Fi Direct Option appears on the screen only if your printer supports this feature.
- Can start to build Wi-Fi Direct by using Samsung Easy Printer Manager (see "Setting up Wi-Fi Direct" on page 188).

Wireless network setup

- **Network Name(SSID)**: The default Network Name is the model name and the maximum length is 22 characters (not including "Direct-xx-").
- **Network Key** is the numeric string, and the size is 8 ~ 64 characters.

17 When the wireless network settings are completed, disconnect the USB cable between the computer and machine.

18 Wireless network set up is completed. After the installation is finished, click **Quit**.

After completing the wireless network connection, you need to install a machine driver to print from an application (see "Installation for Macintosh" on page 142).

Setting the access point using the WPS button

For models that have a WPS button, you can set the wireless network using the WPS button (without a USB connection) and access point (or a router) WPS button.

Items to prepare

- Access point (or wireless router)
- Network-connected computer
- Software CD that was provided with your machine
- A machine installed with a wireless network interface

Creating the infrastructure network

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

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

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

4 Double-click the **MAC_Installer** folder > **Installer OS X** icon.

5 Click **Continue**.

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

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

8 When the message that warns that all applications will close on your computer appears, click **Continue**.

9 Click the **Wireless Network Setting** button on the **User Options Pane**.

Wireless network setup

10 Select **Using the WPS button** and click **Next**.

- For models that support the WPS button, the above window appears.
- If your machine is connected with a USB cable, the above window does not appear. Disconnect the USB cable if you want to set up the wireless network using the WPS button.
- If you want to set up the wireless network using the USB cable, refer to "Access point via USB cable" on page 176.

11 The next window asks you to check if your access point (or wireless router) supports WPS or not.

If the access point (or wireless router) has a WPS button, select **Yes** and click **Next**.

12 Follow the instructions in the window to set up the wireless network.

•For models with a display screen, follow the steps below:

aPress and hold the (WPS) button on the control panel for about 2-4 seconds.

The machine waits up to 2 minutes for the WPS button on the access point (or a router) to be pressed.

bPress the **WPS (PBC)** button on the access point (or wireless router).

The messages are displayed on the display screen in the order below:

-**Connecting:** The machine is connecting to the access point (or wireless router).

-**Connected:** When the machine is successfully connected to the wireless network, the WPS LED light stays on.

-**SSID Type:** After completing the wireless network connection process, the AP's SSID information appears on the display.

•For models without a display screen, follow the steps below:

aPress and hold the (WPS) button on the control panel for about 2 - 4 seconds until the status LED blinks quickly.

The machine starts connecting to the wireless network. The LED blinks slowly for up to two minutes until you press the PBC button on the access point (or wireless router).

bPress the **WPS (PBC)** button on the access point (or wireless router).

-The light blinks fast on the WPS LED. The machine is connecting to the access point (or wireless router).

-When the machine is successfully connected to the wireless network, the WPS LED light stays on.

13 Wireless network set up is completed. After installation is finished, click **Quit**.

After completing the wireless network connection, you need to install a machine driver to print from an application (see "Installation for Macintosh" on page 142).

Ad hoc via USB cable

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

Items to prepare

- Network-connected computer
- Software CD that was provided with your machine
- A machine installed with a wireless network interface
- USB cable

Creating the ad hoc network in Macintosh

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

2 Turn on your computer and the wireless network machine.

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

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

5 Double-click the **MAC_Installer** folder > **Installer OS X** icon.

6 Click **Continue**.

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

Wireless network setup

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

9 When the message that warns that all applications will close on your computer appears, click **Continue**.

10 Click **Wireless Network Setting** button on the **User Options Pane**.

11 The software searches for wireless network devices.

If the search has failed, check if the USB cable is connected between the computer and machine properly, and follow the instructions in the window.

12 After searching the wireless networks, a list of wireless networks your machine has searched appears.

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

Then, click **Next**.

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

If you want to change ad hoc settings, click the **Advanced Setting** button.

- **Enter the wireless Network Name:** Enter the SSID name (SSID is case-sensitive).
- **Operation Mode:** Select ad hoc.
- **Channel:** Select the channel (**Auto Setting** or 2412 MHz to 2467 MHz).
- **Authentication:** Select an authentication type.

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

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

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

Select **Open System** or **Shared Key** for the authentication and click **Next**.

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

13 The window showing the wireless network settings appears. Check the settings and click **Next**.

Wireless network setup

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

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

- **For the DHCP method**

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

- **For the Static method**

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

  For example,

  If the computer's network information is shown as follows:

  -IP address: 169.254.133.42

  -Subnet Mask: 255.255.0.0

  Then, the machine's network information should be as shown below:

  -IP address: 169.254.133.**43**

  -Subnet Mask: 255.255.0.0 (Use the computer's subnet mask.)

  -Gateway: 169.254.133.**1**

14 When the window that tells you that the network cable connection is confirmed appears, disconnect the network cable and click **Next**.

If the network cable is connected, it may have trouble finding the machine when configuring the wireless network.

15 The wireless network connects according to the network configuration.

16 Wireless network set up is completed. After installation is finished, click **Quit**.

After completing the wireless network connection, you need to install a machine driver to print from an application (see "Installation for Macintosh" on page 142).

Using a network cable

Machines that do not support the network port will not be able to use this feature (see "Rear view" on page 22).

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

Wireless network setup

- After completing the wireless network connection, you need to install a machine driver to print from an application (see "Installing driver over the network" on page 151).
- See your network administrator, or the person that set up your wireless network, for information about your network configuration.

Items to prepare

- Access point
- Network-connected computer
- Software CD that was provided with your machine
- A machine installed with a wireless network interface
- Network cable

Printing a network configuration report

You can identify the network settings of your machine by printing a network configuration report.

See "Printing a network configuration report" on page 148.

IP setting using SetIP Program (Windows)

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

See "Setting IP address" on page 148.

Configuring the machine's wireless network

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

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

Using SyncThru™ Web Service

Before starting wireless parameter configuration, check the cable connection status.

Wireless network setup

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

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

For example,

3 Click **Login** on the upper right of the SyncThru™ Web Service website.

4 If it's your first time logging into **SyncThru™ Web Service** you need to log-in as an administrator. Type in the below default **ID** and **Password**. We recommend you to change the default password for security reasons.

•**ID: admin**

•**Password: sec00000**

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

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

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

7 Select the one **Network Name(SSID)** in the list.

•**SSID**: SSID (Service Set Identifier) is a name that identifies a wireless network, access points, and wireless devices attempting to connect to a specific wireless network must use the same SSID. The SSID is case sensitive.

•**Operation Mode**: **Operation Mode** refers to the type of wireless connections (see "Wireless network name and network key" on page 160).

-**Ad-hoc**: Allows wireless devices to communicate directly with each other in a peer-to-peer environment.

-**Infrastructure**: Allows wireless devices to communicate with each other through an access point.

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

8 Click **Next**.

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

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

Wireless network setup

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

Turning the Wi-Fi network on/off

If your machine has a display, you can also turn on/off the Wi-Fi from the machine's control panel using the **Network** menu.

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

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

For example,

3 Click **Login** on the upper right of the SyncThru™ Web Service website.

4 If it's your first time logging into **SyncThru™ Web Service** you need to log-in as an administrator. Type in the below default **ID** and **Password**. We recommend you to change the default password for security reasons.

•**ID: admin**

•**Password: sec00000**

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

6 Click **Wireless** > **Custom**.

You can also turn the Wi-Fi network on/off.

Setting the Wi-Fi Direct for mobile printing

Wi-Fi Direct is an easy-to-setup peer-to-peer connecting between method for your printer and a mobile device that provides a secure connection and better throughput than ad hoc mode.

With Wi-Fi Direct, you can connect your printer to a Wi-Fi Direct network while concurrently connecting to an access point, You can also use a wired network and a Wi-Fi Direct network simultaneously so multiple users can access and print documents both from Wi-Fi Direct and from a wired network.

Wireless network setup

- You cannot connect to the internet through the printer's Wi-Fi Direct.
- The supported protocol list may differ from your model, Wi-Fi Direct networks do NOT support IPv6, network filtering, WINS, and SLP services.

Setting up Wi-Fi Direct

You can enable Wi-Fi Direct feature by one of the following methods.

From the USB cable-connected computer(recommended)

- When setting from the supplied software CD, see the access point via USB cable.

  -Windows user, see "Access point via USB cable" on page 163.

  -Macintosh user, see "Access point via USB cable" on page 176.

- After the driver installation is complete, Samsung Easy Printer Manager can be set and changes in the Wi-Fi Direct can be made.

Samsung Easy Printer Manager is Available for Windows and Macintosh OS users only.

-From the **Start** menu, select **Programs** or **All Programs** > **Samsung Printers** > Samsung Easy Printer Manager > **Device Settings** > **Network**.

▪**Wi-Fi Direct On/Off**: Select **On** to enable.

▪**Device Name**: Enter the printer's name for searching for your printer on a wireless network. By default, the device name is the model name.

▪**IP Address**: Enter the IP address of the printer. This IP address is used only for the local network and not for the infrastructure wired or wireless network. We recommend using the default local IP address (the default local IP address of the printer for Wi-Fi Direct is 192.168.3.1)

▪**Group Owner**: Activate this option to assign the printer the Wi-Fi Direct group's owner. The **Group Owner** acts similar to a wireless access point. We recommend activating this option.

▪**Network Key**: If your printer is a **Group Owner**, a **Network Key** is required for other mobile devices to connect to your printer. You can configure a network key yourself, or can remember the given Network Key that is randomly generated by default.

From the machine (Machines with a display screen)

- Select **Network** > **Wireless** > **Wi-Fi Direct** from the control panel.
- Enable **Wi-Fi Direct**.

Wireless network setup

From the network-connected computer

If your printer is using a network cable or a wireless access point, you can enable and configure Wi-Fi Direct from SyncThru™ Web Service.

- Access **SyncThru™ Web Service**, select **Settings** > **Network Settings** > **Wireless** > **Wi-Fi Direct**.
- Enable or disable **Wi-Fi Direct** and set other options.

- For Linux OS users,
  -Print an IP network configuration report to check the output (see "Printing a network configuration report" on page 148).
  -Access **SyncThru Web Service**, select **Settings** > **Network Settings** > **Wireless** > **Wi-Fi Direct**.
  -Enable or disable **Wi-Fi Direct**.

Setting up the mobile device

- After setting up Wi-Fi Direct from the printer, refer to the user manual of the mobile device you are using to set its Wi-Fi Direct.
- After setting up Wi-Fi Direct, you need to download the mobile printing application (For example: Samsung Mobile printer) to print from your smartphone.

- When you have found the printer you want to connect to from your mobile device, select the printer and the printer's LED will blink. Press the WPS button on the printer and it will be connected to your mobile device.
- If your mobile device does not support WPS, you need to enter the "Network Key" of a printer instead of pushing the WPS button.

Troubleshooting

Problems during setup or driver installation

Printers Not Found

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

Wireless network setup

Connecting Failure - SSID Not Found

- The machine is unable to find the network name (SSID) you have selected or entered. Check the network name (SSID) on your access point and try connecting again.
- Your access point is not turned on. Turn on your access point.

Wireless network setup

Connecting Failure - Invalid Security

- Security is not configured correctly. Check the configured security on your access point and machine.

Connecting Failure - General Connection Error

- Your computer is not receiving a signal from your machine. Check the USB cable and your machine's power.

Connecting Failure - Connected Wired Network

- Your machine is connected with a wired network cable. Remove the wired network cable from your machine.

PC Connection Error

- The configured network address is unable to connect between your computer and machine.

  -For a DHCP network environment

  The receives the IP address automatically (DHCP) when computer is configured to DHCP.

If the printing job is not working in DHCP mode, the problem may be caused by the automatically changed IP address. Compare the IP address between the product's IP address and the printer port's IP address.

How to compare:

1 Print the network information report of your printer, and then check the IP address (see "Printing a network configuration report" on page 148).

2 Check the printer port's IP address from your computer.

a Click the Windows **Start** menu.

b For Windows Server 2000, select **Settings** > **Printers**.

- For Windows XP/Server 2003, select **Printer and Faxes**.
- For Windows Server 2008/Vista, select **Control Panel** > **Hardware and Sound** > **Printers**.
- For Windows 7, select **Control Panel** > **Devices and Printers**.
- For Windows Server 2008 R2, select **Control Panel** > **Hardware** > **Devices and Printers**.

c Right-click your machine.

d For Windows XP/2003/2008/Vista, press **Properties**.

For Windows 7 and Windows Server 2008 R2, from context menus, select the **Printer properties**.

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

e Click **Port** tab.

f Click **Configure Port..** button.

g Check if **Printer Name** or **IP Address:** is the IP address on the network configuration Sheet.

3 Change the printer port's IP address if it is different from the network information report's.

If you want to use the software installation CD to change the port IP, connect to a network printer. Then reconnect the IP address.

Wireless network setup

-For a Static network environment

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

For example,

If the computer's network information is as shown below:

▪IP address: 169.254.133.42

▪Subnet Mask: 255.255.0.0

Then the machine's network information should be as below:

▪IP address: 169.254.133.**43**

▪Subnet Mask: 255.255.0.0 (Use the computer's subnet mask.)

▪Gateway: 169.254.133.**1**

Other problems

If problems occur while using the machine on a network, check the following:

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

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

  If the computer and the machine are connected on the same network and it cannot be found when searching, firewall software might be blocking the communication. Refer to the user's guide for the software to turn it off and try searching for the machine again.
- Check whether the machine's IP address is allocated correctly. You can check the IP address by printing the network configuration report.
- Check whether the access point (or wireless router) has a configured security (password). If it has a password, refer to the access point (or wireless router) administrator.
- Check the machine's IP address. Reinstall the machine driver and change the settings to connect to the machine on the network. Due to the characteristics of DHCP, the allocated IP address could change if the machine is not used for a long time or if the access point has been reset.

  Register the product's MAC address when you confogure the DHCP server on the access point (or wireless router). Then you can always use the IP address that is set with the MAC address. You can identify the Mac address of your machine by printing a network configuration report (see "Printing a network configuration report" on page 148).
- Check the wireless environment. You might not be able to connect to the network in the infrastructure environment where you need to type in a user's information before connecting to the access point (or wireless router).

Wireless network setup

- This machine only supports IEEE 802.11 b/g/n and Wi-Fi. Other wireless communication types (e.g., Bluetooth) are not supported.
- When using the ad hoc mode, in operating systems such as Windows Vista, you might need to set the wireless connection setting every time you use the wireless machine.
- You cannot use infrastructure mode and ad hoc mode at the same time for Samsung wireless network machines.
- The machine is within the range of the wireless network.
- The machine is located away from obstacles that could block the wireless signal.

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

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

  Many devices can interfere with the wireless signal, including a microwave oven and some Bluetooth devices.
- Whenever the configuration of your access point (or wireless router) changes, you must do the product's wireless network setup again.
- The maximum number of device that can be connected via **Wi-Fi Direct** is 4.
- If **Wi-Fi Direct** is **ON**, the connection between the AP and the machine will be the 802.11 b/g interface.

Samsung MobilePrint

What is Samsung MobilePrint?

Samsung MobilePrint is a free application that enables users to print photos, documents, and web pages directly from your smartphone or tablet. **Samsung MobilePrint** is not only compatible with your Android, Windows and iOS smart phones but also with your iPod Touch and tablet PC. It connects your mobile device to a network connected Samsung printer or to a wireless printer through a Wi-Fi access point. Installing a new driver or configuring network settings isn't necessary – just simply install the **Samsung MobilePrint** application, and it will automatically detect compatible Samsung printers. Besides printing photos, web pages, and PDFs, scanning is also supported. If you have Samsung multfunction printer, scan any document into a JPG, PDF, or PNG format for quick and easy viewing on your mobile device.

Downloading Samsung MobilePrint

To download **Samsung MobilePrint**, go to the application store (Samsung Apps, Android Market, App Store, Marketplace) on your mobile device, and just search for "**Samsung MobilePrint**." You can also visit iTunes for Apple devices or Marketplace for Windows devices on your computer.

Supported Mobile OS

- Android OS 2.1 or higher
- iOS 4.0 or higher
- Windows Phone 7 or higher

Supported devices

- **iOS 4.0 or higher:** iPod Touch, iPhone, iPad
- **Android 2.1 or higher:** Galxy S, Galaxy S2, Galaxy Tab, and Android mobile devices
- **Windows Phone 7 or higher:** Samsung Focus, Omnia7, and OmniaW, and Windows mobile devices

AirPrint

AirPrint allows you to wirelessly print directly from an iPhone, iPad, or iPod touch running iOS 4.2 or later.

Setting up AirPrint

Bonjour(mDNS) and IPP protocols are required on your machine to use the **AirPrint** feature. You can enable the **AirPrint** feature by one of the following methods.

1. Check whether the machine is connected to the network.
2. Start a web browser such as Internet Explorer, Safari, or Firefox and enter your machine's new IP address in the browser window.

   For example,

3. Click **Login** in the upper right of the SyncThru™ Web Service website.
4. If it's your first time logging into **SyncThru™ Web Service** you need to log-in as an administrator. Type in the below default **ID** and **Password**. We recommend you to change the default password for security reasons.

   •ID: admin

   •Password: sec00000
5. When the **Embedded Web Service** window opens, click **Settings** > **Network Settings**.
6. Click **Raw TCP/IP, LPR, IPP** or **mDNS** .

   You can enable the IPP protocol or mDNS protocol.

Printing via AirPrint

For example, the iPad manual provides these instructions:

1. Open your email, photo, web page, or document you want to print.
2. Touch the action icon( ).
3. Select **your printer driver name** and option menu to set up.
4. Touch **Print** button. Print it out.

Cancelling print job: To cancel the printing job or view the print summary, click the print center icon ( ) in multitasking area. You can click cancel in the print center.

Google Cloud Print

Google Cloud Print™ is a service that allows you to print to a printer using your smart phone, tablet, or any other web-connected devices. Just register your Google account with the printer, and you are ready to use the Google Cloud Print service. You can print your document or email with Chrome OS, Chrome browser, or a Gmail™/ Google Docs™ application on your mobile device, so you don't need to install the printer driver on the mobile device. Refer to the Google website (http://support.google.com/cloudprint) for more information about Google Cloud Print.

Registering your Google account to the printer

- Make sure the printer machine is turned on and connected to a wired or wireless network that has access to the Internet.
- You should create your Google account in the advance.

1. Open the Chrome browser.
2. Visit www.google.com.
3. Sign in to the Google website with your Gmail address.
4. Enter your printer's IP address in the address field and press the Enter key or click **Go**.
5. Click **Login** in the upper right corner of the SyncThru™ Web Service website.
6. If it's your first time logging into **SyncThru™ Web Service** you need to log-in as an administrator. Type in the below default **ID** and **Password**. We recommend you to change the default password for security reasons.
   - **ID: admin**
   - **Password: sec00000**

If the network environment is using a proxy server, you need to configure the proxy's IP and port number from **Settings** > **Network Settings** > **Google Cloud Print** > **Proxy Setting**. Contact your network service provider or network administrator for more information.

7. When the **SyncThru™ Web Service** window opens, click **Settings** > **Network Settings** > **Google Cloud Print**.
8. Enter your printer's name and description.
9. Click **Register**.

   The confirmation pop-up window appears.

If you set the browser to block pop-ups, the confirmation window will not appear. Allow the site to show pop-ups.

Google Cloud Print

10 Click **Finish printer registration**.

11 Click **Manage your printers**.

Now your printer is registered with Google Cloud Print service.

Google Cloud Print-ready devices will appear in the list.

Printing with Google Cloud Print

The printing procedure varies depending on the application or the device you are using. You can see the application list that supports Google Cloud Print service.

Make sure the printer is turned on and connected to a wired or wireless network that has access to the Internet.

Printing from an application on mobile device

The following steps are an example of using the Google Docs app from Android mobile phone.

1 Install the Cloud Print application on your mobile device.

If you do not have the application, download it from the application store such as Android Market or App Store.

2 Access the Google Docs application from your mobile device.

3 Tap the option button of the document that you want to print.

4 Tap the send button.

5 Tap the Cloud Print button.

6 Set the printing options if you want.

7 Tap **Click here to Print**.

Printing from the Chrome browser

The following steps are an example of using the Chrome browser.

1 Run Chrome.

2 Open the document or email that you want to print.

3 Click the wrench icon in the browser's top right corner.

4 Click **Print**. A new tab for printing appears.

Google Cloud Print

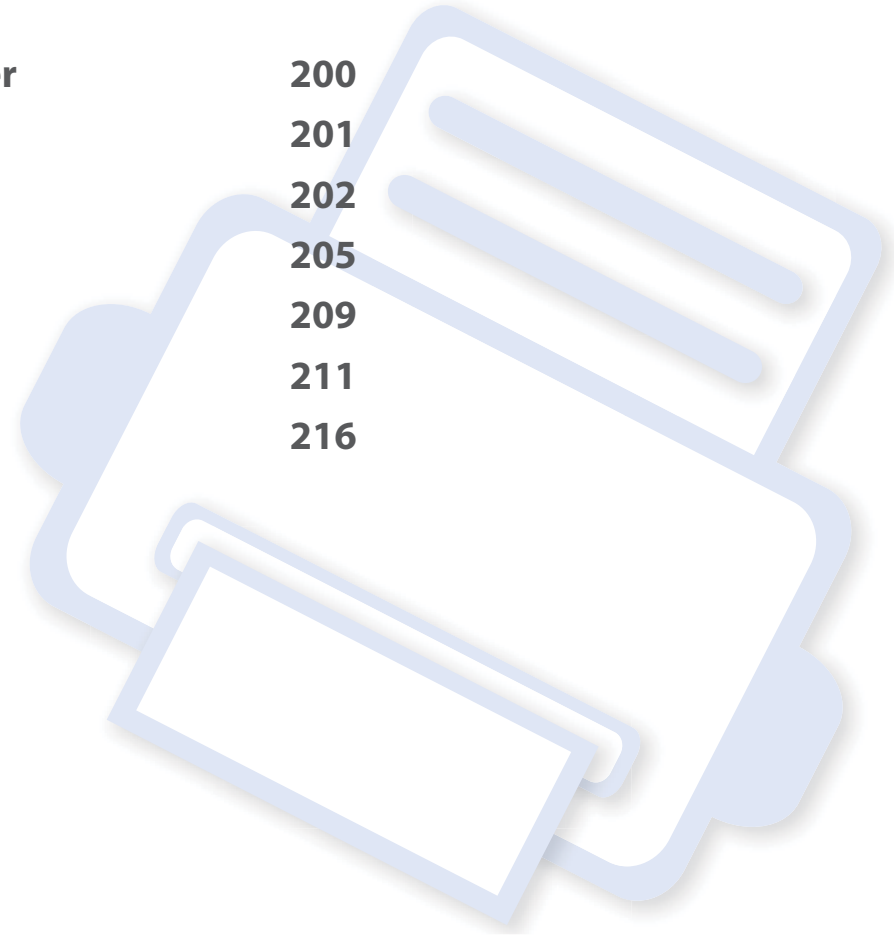
5 Select **Print with Google Cloud Print**.

6 Click the **Print** button.

3. Useful Setting Menus

This chapter explains how to browse the current status of your machine, and the method of setting for advanced machine setup.

- **Before you begin reading a chapter** 200
- **Print** 201
- **Copy** 202
- **Fax** 205
- **Scan** 209
- **System setup** 211
- **Network setup** 216



Before you begin reading a chapter

This chapter explains all the features available for this series' models to help users easily understand the features.

You can check the features available for each model in the Basic Guide (see "Menu overview" on page 33).

The following are tips for using this chapter

- The control panel provides access to various menus to set up the machine or use the machine's functions. These menus can be accessed by pressing (**Menu**).
- Some menus may not appear on the display depending on options or models. If so, it is not applicable to your machine.
- For models that do not have the (**Menu**) on the control panel, this feature is not applicable (see "Control panel overview" on page 23).
- Some menu names may differ from your machine depending on its options or the models.

Print

Some menus may not appear in the display depending on options or models. If so, it is not applicable to your machine (see "Menu overview" on page 33).

To change the menu options:

- Press (**Menu**) > **Print Setup** on the control panel.

Item	Description
Orientation	Selects the direction in which information is printed on a page.
Copies	You can enter the number of copies using the number keypad.
Resolution	Specifies the number of dots printed per inch (dpi). The higher the setting, the sharper printed characters and graphics.
Trapping	Reduces the white gap caused by misalignment of color channels in color printing mode. Also black text will be overprinted on other colors.
Document Type	Improves the printing quality by selecting the document type for the current printing job.
Screen	Affects the resolution and clarity of your color output. • **Normal:** This mode will generate printouts with smooth tone over the entire page. • **Enhanced:** This mode will generate printouts with sharp texts and smooth graphic/photo objects in the page. • **Detailed:** This mode will generate printouts with sharp details over the entire page.
Clear Text	Selects this option to print texts clearer than on a normal document.
Auto CR	Allows you to append the required carriage return to each line feed, which is useful for Unix or DOS users.
Emulation	Sets the emulation type and option.

Copy

Copy feature

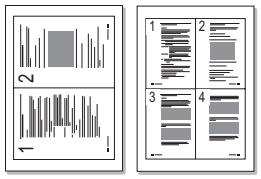
Some menus may not appear in the display depending on options or models. If so, it is not applicable to your machine (see "Menu overview" on page 33).

To change the menu options:

In copy mode, press (**Menu**) > **Copy Feature** on the control panel.

- **CLX-330x Series / CLX-330xW Series:** When the **Scan to** button's LED is off, the machine is in copy mode.
- **CLX-330xFN Series / CLX-330xFW Series:** Press (copy) on the control panel.

Item	Description
Original Size	Sets the image size.

Item	Description
Reduce/Enlarge	Reduces or enlarges the size of a copied image (see "Reduced or enlarged copy" on page 61). If the machine is set Eco mode, reduce and enlarge features are not available.
Darkness	Adjusts the brightness level to make a copy that is easier to read, when the original contains faint markings and dark images (see "Darkness" on page 59)
Original Type	Improves the copy quality by selecting the document type for the current copy job (see "Original" on page 60)
Layout	Adjusts the layout format such as poster, clone, ID copy, 2/4-up, booklet, etc.
Layout > **2-up** or **Layout** > **4-up**	Reduces the size of the original images and prints 2 or 4 pages onto one sheet of paper.  This copy feature is available only when you load originals into the document feeder.

Item	Description
Layout > **ID Copy**	prints one side of the original on the upper half of the paper and the other side on the lower half without reducing the size of the original. This feature is helpful for copying a small-sized item such as business card.
Adjust Bkgd	Prints an image without its background. This copy feature removes the background color and can be helpful when copying an original containing color in the background, such as a newspaper or a catalog. • **Off:** Does not use this feature. • **Auto:** Optimizes the background. • **Enhance Lev.1~2:** The higher the number is, the more vivid the background is. • **Erase Lev.1~4:** The higher the number is, the lighter the background is.

Copy Setup

Some menus may not appear in the display depending on options or models. If so, it is not applicable to your machine (see "Menu overview" on page 33).

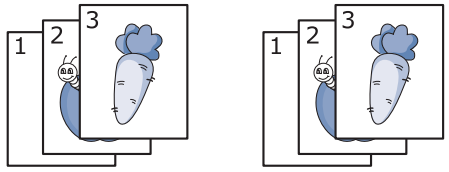
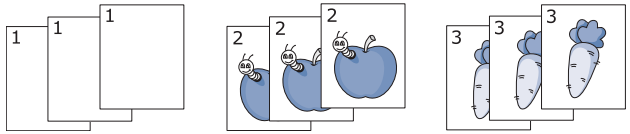
To change the menu options:

In copy mode, press (**Menu**) > **Copy Setup** on the control panel.

- **CLX-330x Series / CLX-330xW Series:** When the **Scan to** button's LED is off, the machine is in copy mode.
- **CLX-330xFN Series / CLX-330xFW Series:** Press (copy) on the control panel.

Item	Description
Change Default	Resets the value or setting to the printer's out-of-box state.
Change Default > **Copies**	You can enter the number of copies using the number keypad.

Copy

Item	Description
Change Default > Copy Collation	Set the machine to sort the copy job. For example, if you make 2 copies of a 3 page original, one complete 3 page document will print followed by a second complete document. • **On:** Prints output in sets to match the sequence of originals.  • **Off:** Prints output sorted into stacks of individual pages. 
Change Default > Reduce/Enlarge	Reduces or enlarges the size of a copied image (see "Reduced or enlarged copy" on page 61). If the machine is set Eco mode, reduce and enlarge features are not available.

Item	Description
Change Default > Darkness	Adjusts the brightness level to make a copy that is easier to read, when the original contains faint markings and dark images (see "Darkness" on page 59)
Change Default > Original Type	Improves the copy quality by selecting the document type for the current copy job (see "Original" on page 60)
Change Default > Adjust Bkgd	Prints an image without its background. This copy feature removes the background color and can be helpful when copying an original containing color in the background, such as a newspaper or a catalog. • **Off:** Does not use this feature. • **Auto:** Optimizes the background. • **Enhance Lev.1~2:** The higher the number is, the more vivid the background is. • **Erase Lev.1~4:** The higher the number is, the lighter the background is.

Fax

Fax Feature

Some menus may not appear in the display depending on options or models. If so, it is not applicable to your machine (see "Menu overview" on page 33).

To change the menu options:

- Press (fax) > (**Menu**)> **Fax Feature** on the control panel.

Item	Description
Darkness	Adjusts the brightness level to scan an original that is easier to read, when the original contains faint markings and dark images (see "Darkness" on page 67).
Resolution	The default document settings procedure good results when using typical text-based originals. However, if you send originals that are of poor quality, or contain photographs, you can adjust the resolution to produce a higher quality fax (see "Resolution" on page 67).
Original Size	Sets the image size.
Multi Send	Sends a fax to multiple destinations (see "Sending a fax to multiple destinations" on page 65). You cannot send a color fax using this feature.
Delay Send	Sets your machine to send a fax at a later time when you will not be present (see "Delaying a fax transmission" on page 246). You cannot send a color fax using this feature.
Priority Send	Scans the original into memory and immediately transmits it when the current operation is finished. Priority transmission will interrupt a sending to multiple destinations between stations (example, when the transmission to station A ends, before transmission to station B begins) or between redial attempts (see "Sending a priority fax" on page 247).
Send Forward	Forwards the sent fax to other destination by a fax or PC. See "Forwarding a sent fax to another destination" on page 248.

Item	Description
Rcv. Forward	Forwards the received fax to other destination by a fax or PC. If you are out of office but have to receive the fax, this feature may be useful. See "Forwarding a received fax" on page 248.
Secure Receive	Stores the received fax in memory without printing out. To print received documents, you need to enter the password. You can prevent your received faxes from being accessed by unauthorized people (see "Receiving in secure receiving mode" on page 251).
Add Page	Adds additional documents to a reserved delay fax job (see "Adding documents to a reserved fax" on page 247).
Cancel Job	Cancels the delayed fax job which is saved in memory (see "Canceling a reserved fax job" on page 247).

Sending setup

Some menus may not appear in the display depending on options or models. If so, it is not applicable to your machine (see "Menu overview" on page 33).

To change the menu options:

- Press (fax) > (**Menu**) > **Fax Setup** > **Sending** on the control panel.

Item	Description
Redial Times	Sets the number of redial attempts. If you enter 0, the machine will not redial.
Redial Term	Sets the time interval before automatic redialling.
Prefix Dial	Sets a prefix of up to five digits. This number dials before any automatic dial number is started. It is useful for accessing a PABX exchange.
ECM Mode	Sends faxes using error correction mode (ECM) to makes sure the faxes are sent smoothly without any error. It may take more time.
Fax Confirm.	Sets the machine to print a report whether a fax transmission was successfully completed or not. If you select **On-Error**, the machine prints a report only when a transmission is not successful.
Image TCR	Prints a transmission report with a minimized image of the first page of the fax sent.
Dial Mode	Sets the dialing mode to either tone or pulse. This setting may not be available depending on your country.

Fax

Receiving setup

Some menus may not appear in the display depending on options or models. If so, it is not applicable to your machine (see "Menu overview" on page 33).

To change the menu options:

- Press (fax) > (**Menu**) > **Fax Setup** > **Receiving** on the control panel.

Item	Description
Receive Mode	Selects the default fax receiving mode.
Ring To Answer	Specifies the number of times the machine rings before answering an incoming call.
Stamp RCV Name	Automatically prints the page number, and the date and time of reception at the bottom of each page of a received fax.
Rcv Start Code	Initiates fax reception from an extension phone plugged into the EXT socket on the back of the machine. If you pick up the extension phone and hear fax tones, enter the code. It is preset to *9* at the factory.
Auto Reduction	Automatically reduces an incoming fax page to fit the size of the paper loaded in the machine.
Discard Size	Discards a specific length from the end of the received fax.
Junk Fax Setup	Blocks any unwanted faxes that you stored in the memory as junk fax numbers. This setting may not be available depending on your country.
DRPD Mode	Enables a user to use a single telephone line to answer several different telephone numbers. You can set the machine to recognize different ring patterns for each number. This setting may not be available depending on your country (see "Receiving faxes using DRPD mode" on page 251).

Another setup

Some menus may not appear in the display depending on options or models. If so, it is not applicable to your machine (see "Menu overview" on page 33).

Fax

To change the menu options:

- Press (fax) > (**Menu**) > **Fax Setup** on the control panel.

Item	Description
Change Default	Resets the value or setting to the printer's out-of-box state.
Auto Report	Sets the machine to print a report with detailed information about the previous 50 communication operations including time and dates.
Manual TX/RX	.....

Scan

Scan feature

Some menus may not appear in the display depending on options or models. If so, it is not applicable to your machine (see "Menu overview" on page 33).

To change the menu options:

in scan mode, press (**Menu**) > **Scan Feature** on the control panel.

- **CLX-330x Series / CLX-330xW Series:** When the **Scan to** button's LED is on, the machine is in scan mode.
- **CLX-330xFN Series / CLX-330xFW Series:** Press (scan) on the control panel.

Item	Description
USB Feature	Sets scan destination to a USB. You scan the originals and save the scanned image to a USB device.
USB Feature > Original Size	Sets the image size.
USB Feature > Original Type	Sets the original document's type.
USB Feature > Resolution	Sets the image resolution.
USB Feature > Color Mode	Sets the color mode.
USB Feature > File Format	Sets the file format in which the image is to be saved. If you select BMP, JPEG, TIFF, or PDF, you can select to scan multiple pages.
USB Feature > Darkness	Adjusts the brightness level to scan.

Scan setup

Some menus may not appear in the display depending on options or models. If so, it is not applicable to your machine (see "Menu overview" on page 33).

To change the menu options:

In scan mode, press (**Menu**) > **Scan Setup** on the control panel.

Scan

- **CLX-330x Series / CLX-330xW Series:** When the **Scan to** button's LED is on, the machine is in scan mode.
- **CLX-330xFN Series / CLX-330xFW Series:** Press (scan) on the control panel.

Item	Description
Change Default	Resets the value or setting to the printer's out-of-box state.
Change Default > USB Default	Resets the USB scan setting to the printer's out-of-box state.

System setup

Machine setup

Some menus may not appear in the display depending on options or models. If so, it is not applicable to your machine (see "Menu overview" on page 33).

To change the menu options:

- Press (**Menu**) > **System Setup** > **Machine Setup** on the control panel.

Item	Description
Machine ID	Sets the machine ID which will be printed at the top of each fax page that you send.
Fax Number	Sets the fax number which will be printed at the top of each fax page that you send.
Date & Time	Sets the date and time.
Clock Mode	Selects the format for displaying time between 12 hr. and 24 hr.
Language	Sets the language of the text that appears on the control panel display.
Power Save	Sets how long the machine waits before going to power save mode. When the machine does not receive data for an extended period of time, power consumption is automatically lowered.
Auto Power Off	Turns power off automatically when the machine has been in power save mode for the length of time set in **Auto Power Off** > **On** > **Timeout**. • To turn the machine on again, press the (**Power/Wakeup**) button on the control panel (make sure the main power switch is on). • If you run the printer driver or Samsung Easy Printer Manager, the time automatically extends. • While the machine is connected to the network or working on a print job, **Auto Power Off** feature doesn't work.

System setup

Item	Description
Wakeup Event	You can set the condition to wake up from power-save mode. Set the item on. • **Button Press**: When you press any button except **Power/Wakeup** button, the machine wake up from the power save mode. • **Scanner:** When you insert paper in the document feeder, the machine wake up from the power save mode. • **Printer:** When you open or close the paper tray, the machine wake up from the power save mode.
System Timeout	Sets the time that the machine remembers previously used copy settings. After the timeout, the machine restores the default copy settings.
Job Timeout	Sets the length of time the printer waits before printing the last page of a print job that does not end with a command to print the page.
Altitude Adj.	Optimize print quality according to the machine's altitude.
Humidity	Optimizes print quality according to the humidity in the environment.

Item	Description
Auto Continue	Determine whether or not the machine continues printing when it detects the paper does not match the paper settings. • **Off:** If a paper mismatch occurs, the machine waits until you insert the correct paper. • **On:** If a paper mismatch occurs, an error message will display. The machine waits for about 30 second, then automatically clear the message and continue printing.
Paper Substit.	Automatically substitutes the printer driver's paper size to prevent the paper mismatch between Letter and A4. For example, if you have A4 paper in the tray but you set the paper size to Letter in the printer driver, the machine prints on A4 paper and vice versa.
PrintBlankPage	The printer detects the printing data from computer whether a page is empty or not. You can set to print or skip the blank page.

System setup

Item	Description
Eco Settings	Allows you to save print resources and enables eco-friendly printing. • **Default Mode:** Select whether to turn the Eco mode on or off. **On force** (**On-Forced**): Sets the Eco mode on with password. If a user wants to turn the Eco mode on/off, the user needs to enter the password. • **Select Template (Select Temp.):** Selects the eco template set from the SyncThru™ Web Service.

Paper setup

Some menus may not appear in the display depending on options or models. If so, it is not applicable to your machine (see "Menu overview" on page 33).

To change the menu options:

- Press (**Menu**) > **System Setup** > **Paper Setup** on the control panel.

Item	Description
Paper Size	Sets the paper size as A4, Letter, or other paper sizes, according to your requirements.
Paper Type	Chooses the type of the paper for each tray.
Margin	Sets the margins for the document.

Sound / Volume

Some menus may not appear in the display depending on options or models. If so, it is not applicable to your machine (see "Menu overview" on page 33).

To change the menu options:

- Press (**Menu**) > **System Setup** > **Sound/Volume** on the control panel.

Item	Description
Key Sound	Turns the key sound on or off. With this option set to on, a tone sounds each time a key is pressed.

Item	Description
Alarm Sound	Turns the alarm sound on or off. With this option set to on, an alarm tone sounds when an error occurs or fax communication ends.
Speaker	Turns on or off the sounds from the telephone line through the speaker, such as a dial tone or a fax tone. With this option set to **Comm.** which means the speaker is on until the remote machine answers. You can adjust the volume level using **On Hook Dial**. You can adjust the speaker volume only when the telephone line is connected. **a** Press (fax) on the control panel. **b** Press **On Hook Dial**. A dial tone sounds from the speaker. **c** Press the arrows until you hear the volume you want. **d** Press **On Hook Dial** to save the change and return to ready mode.
Ringer	Adjusts the ringer volume. For the ringer volume, you can select off, low, middle, and high level.

Report

Some menus may not appear in the display depending on options or models. If so, it is not applicable to your machine (see "Menu overview" on page 33).

To change the menu options:

- Press (**Menu**) > **System Setup** > **Report** on the control panel.

Item	Description
Configuration	Prints a report on the machine's overall configuration.
Supplies Info.	Prints supplies' information page.
Address Book	Prints all of the fax number currently stored in the machine's memory.
Fax Confirm.	Prints a transmission report including the fax number, the number of pages, the elapsed time of the job, the communication mode, and the communication results for fax job. You can set up your machine to automatically print a transmission confirmation report after each fax job.

System setup

Item	Description
Fax Sent	Prints information on the faxes you have recently sent.
Fax Received	Prints information on the faxes you have recently received.
Schedule Jobs	Prints the document list currently stored for delayed faxes along with the starting time and type of each operation.
JunkFax	Prints the fax numbers specified as junk fax numbers.
Network Conf.	Prints information on your machine's network connection and configuration.
Usage Counter	Prints a usage page. The usage page contains the total number of pages printed.
Fax Options	Prints the information of a fax reports.

Maintenance

Some menus may not appear in the display depending on options or models. If so, it is not applicable to your machine (see "Menu overview" on page 33).

To change the menu options:

- Press (**Menu**) > **System Setup** > **Maintenance** on the control panel.

Item	Description
CLR Empty Msg.	When toner cartridge is empty, this option appears. You can clear the empty message.
Supplies Life	Shows the supply life indicators (see "Monitoring the supplies life" on page 87.)
Image Mgr.	Allows you to adjust the color setting such as contrast level, color registration, color density, etc. • **Custom Color:** adjusts contrast, color by color. - **Default:** optimizes colors automatically. - **Print Density:** allows you to manually adjust the color contrast for each cartridge. It is recommended to use the Default setting for best color quality. • **Tone Adjust.:** The machine calibrates the toner density of machine for the best possible color print quality.
Serial Number	Shows the machine's serial number. When you call for service or register as a user on the Samsung website, you can find this.
TonerLow Alert	Customizes the level to alert toner low or toner empty (see "Setting the toner low alert" on page 88).

Network setup

Some menus may not appear in the display depending on options or models. If so, it is not applicable to your machine (see "Menu overview" on page 33).

- Press (**Menu**)> **Network** on the control panel.

Option	Description
TCP/IP (IPv4)	Selects the appropriate protocol and configure parameters to use the network environment. There are lots of parameters to be set. If you are not sure, leave as is, or consult the network administrator.
TCP/IP (IPv6)	Selects this option to use the network environment through IPv6 (see "IPv6 configuration" on page 157).
Ethernet Speed	Configure the network transmission speed.
Wireless	Selects this option to use the wireless network.
Clear Setting	Reverts the network settings to the default values. (Reboot required.)
Network Conf.	This list shows information on your machine's network connection and configuration.

Option	Description
Protocol Mgr.	You can activate or deactivate the following protocols. • **Net. Activate:** You can set whether to use Ethernet on or off. Turn the power off and on after you change this option. • **Http Activate:** You can sets whether to use SyncThru™ Web Service or not. Turn the power off and on after you change this option. • **WINS:** You can configure the WINS server. WINS(Windows Internet Name Service) is used in the Windows operating system. Turn the power off and on after you change this option.

Network setup

Option	Description
Protocol Mgr. (continued.)	• **SNMP V1/V2:** You have to enable this option to use SNMP V1/V2 protocol. Administrator's can use SNMP to monitor and manage machines on the network. • **UPnP(SSDP):** You have to enable this option to use UPnP(SSDP) protocol. Turn the power off and on after you change this option. • **MDNS:** You have to enable this option to use MDNS (Multicast Domain Name System) protocol. • **SetIP:** You have to enable this option to use SetIP protocol. • **SLP:** You can configure SLP (Service Location Protocol) settings. This protocol allows host applications to find services in a local area network without prior configuration. Turn the power off and on after you change this option.

4. Special Features

This chapter explains special copying, scanning, faxing, and printing features.

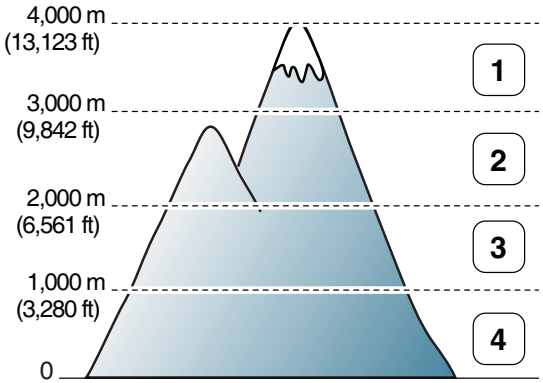
- **Altitude adjustment** 219
- **Entering various characters** 220
- **Setting up the fax address book** 221
- **Printing features** 224
- **Scan features** 236
- **Fax features** 244

- The procedures in this chapter are mainly based on Windows 7.
- It may be necessary to press **OK** to navigate to lower-level menus for some models.

Altitude adjustment

Print quality is affected by atmospheric pressure, which is determined by the height of the machine above sea level. The following information will guide you on how to set your machine for the best print quality.

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



1 High 3
2 High 2
3 High 1
4 Normal

You can set the altitude value from **Device Settings** in Samsung Easy Printer Manager program.

- For Windows and Macintosh users, you set from **Samsung Easy Printer Manager** > **(Switch to advanced mode)** > **Device Settings**. See "Device Settings" on page 263.

- If your machine is connected to the network, you can set the altitude via SyncThru™ Web Service (see "Using SyncThru™ Web Service" on page 258).
- You can also set the altitude in **System Setup** option on the machine's display (see "Machine's basic settings" on page 39).

Entering various characters

As you perform various tasks, you may need to enter names and numbers. For example, when you set up your machine, you enter your name or your company's name, and the fax number. When you store fax numbers or email addresses in memory, you may also enter the corresponding names.

Entering alphanumeric characters

Press the button until the correct letter appears on the display. For example, to enter the letter O, press 6, labeled with MNO. Each time you press 6, the display shows a different letter, M, N, O, m, n, o and finally 6. To find the letter that you want to enter, see "Keypad letters and numbers" on page 220.

- You can enter a space by pressing 1 twice.
- To delete the last digit or character, press the left/right or up/down arrow button.

Keypad letters and numbers

- Special character sets may differ from your machine depending on its options or the models.
- Some of the follow key values may not appear depending on the job you are doing.

Key	Assigned numbers, letters, or characters
1	@ / . ' 1
2	A B C a b c 2
3	D E F d e f 3
4	G H I g h i 4
5	J K L j k l 5
6	M N O m n o 6
7	P Q R S p q r s 7
8	T U V t u v 8
9	W X Y Z w x y z 9
0	& + - , 0
*	* % ^ _ ~ ! # $ ( ) [ ] (These symbols are available when you type for network authentication.)
#	# = | ? " : { } < > ; (These symbols are available when you type for network authentication.)

Setting up the fax address book

You can set up speed number with the fax numbers you use frequently via SyncThru™ Web Service and then easily and quickly enter fax numbers by entering the location numbers assigned to them in address book.

Registering a speed dial number

1 Select (fax) > (**Address Book**) > **New&Edit** > **Speed Dial** on the control panel.

2 Enter a speed dial number and press **OK**.

If an entry is already stored in the number you choose, the display shows the message to allow you to change it. To start over with another speed dial number, press (**Back**).

3 Enter the name you want and press **OK**.

4 Enter the fax number you want and press **OK**.

5 Press the (**Cancel** or **Stop/Clear**) button to return to ready mode.

Using speed dial numbers

When you are prompted to enter a destination number while sending a fax, enter the speed dial number at which you stored the number you want.

- For a one-digit (0-9) speed dial number, press and hold the corresponding digit button on the number keypad for more than 2 seconds.
- For a two- or three-digit speed dial number, press the first digit button(s) and then hold down the last digit button for more than 2 seconds.
- You can print the address book list by selecting (fax) > (**Address Book**) > **Print**.

Editing speed dial numbers

1 Select (fax) > (**Address Book**) > **New&Edit** > **Speed Dial** on the control panel.

2 Enter the speed dial number you want to edit and press **OK**.

3 Change the name and press **OK**.

4 Change the fax number and press **OK**.

Setting up the fax address book

5 Press (**Cancel** or **Stop/Clear**) to return to ready mode.

Registering a group dial number

1 Select (fax) > (**Address Book**) > **New&Edit** > **Group Dial** on the control panel.

2 Enter a group dial number and press **OK**.

If an entry is already stored in the number you choose, the display shows the message to allow you to change it. To start over with another speed dial number, press (**Back**).

3 Search by entering the first few letters of the speed dial's name to put in the group.

4 Select the name and number you want and press **OK**.

5 Select **Yes** when **Add?** appears.

6 Repeat step 3 to include other speed dial numbers into the group.

7 When you have finished, select **No** when **Another No.?** appears and press **OK**.

8 Press (**Cancel** or **Stop/Clear**) to return to ready mode.

Editing group dial numbers

1 Select (fax) > (**Address Book**) > **New&Edit** > **Group Dial** on the control panel.

2 Enter the group dial number you want to edit and press **OK**.

3 Enter a new speed dial number to add and press **OK**, then **Add?** appears.

Enter a speed dial number stored in the group and press **OK**, **Delete?** appears.

4 Press **OK** to add or delete the number.

5 Repeat step 3 to add or delete more numbers.

6 Select **No** at the **Another No.?** and press **OK**.

7 Press (**Cancel** or **Stop/Clear**) to return to ready mode.

Searching address book for an entry

There are two ways to search for a number in memory. You can either scan from A to Z sequentially, or you can search by entering the first letters of the name associated with the number.

Setting up the fax address book

1 Select ct (fax) > (**Address Book**) > **Search&Dial** > **Speed Dial** or **Group Dial** on the control panel.

2 Enter **All** or **ID** and press **OK**.

3 Press the name and number or the keypad button labeled with the letter you want to search.

For example, if you want to find the name “MOBILE,” press the **6** button, which is labeled with “MNO.”

4 Press (**Cancel** or **Stop/Clear**) to return to ready mode.

Printing address book

You can check your (**Address Book**) settings by printing a list.

1 Select ct (fax) > (**Address Book**) > **Print** on the control panel.

2 Press **OK**.

The machine begins printing.

Printing features

- For basic printing features, refer to the Basic Guide (see "Basic printing" on page 53).
- This feature may not be available depending on model or optional goods (see "Features by models" on page 7).

Changing the default print settings

1. Click the Windows **Start** menu.
2. Select **Control Panel** > **Devices and Printers**.
3. Right-click on your machine.
4. Select **Printing preferences**.

If **Printing preferences** has a ▶, you can select other printer drivers connected to the selected printer.

5. Change the settings on each tab.
6. Click **OK**.

If you want to change the settings for each print job, change it in **Printing Preferences**.

Setting your machine as a default machine

1. Click the Windows **Start** menu.
2. Select **Control Panel** > **Devices and Printers**.
3. Select your machine.
4. Right-click your machine and select **Set as Default Printer**.

If **Printing preferences** has a ▶, you can select other printer drivers connected to the selected printer.

Printing features

Using advanced print features

XPS printer driver: used to print XPS file format.

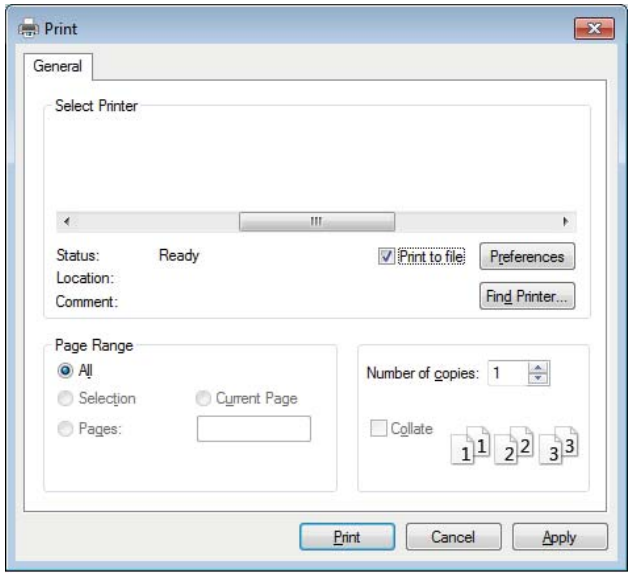
- See "Features by models" on page 7.
- The XPS printer driver can be installed only on Windows Vista OS or higher.
- Install optional memory when an XPS job does not print because the printer is out of memory.
- For models that provide XPS driver on the software CD:

  -You can install the XPS printer driver when you insert the software CD into your CD-ROM drive. When the installation window appears, select **Custom Installation**. You can select the XPS printer driver in the **Select Software** window.
- For models that provide XPS driver from the Samsung website, www.samsung.com > find your product> Support or downloads.

Printing to a file (PRN)

You will sometimes need to save the print data as a file.

1 Check the **Print to file** box in the **Print** window.



2 Click **Print**.

3 Type in the destination path and the file name, and then click **OK**.

For example, **c:\Temp\file name**.

If you type in only the file name, the file is automatically saved in **My Documents**, **Documents and Settings**, or **Users**. The saved folder may differ, depending on your operating system or the application you are using.

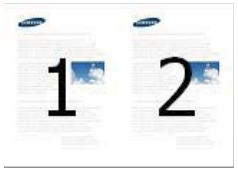
Printing features

Understanding special printer features

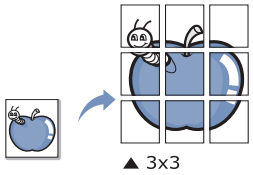
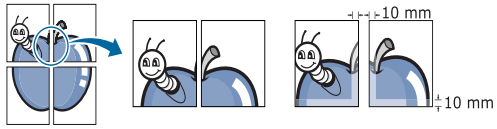
You can use advanced printing features when using your machine.

To take advantage of the printer features provided by your printer driver, click **Properties** or **Preferences** in the application's **Print** window to change the print settings. The machine name, that appears in the printer properties window may differ depending on the machine in use.

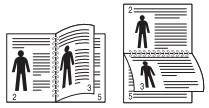
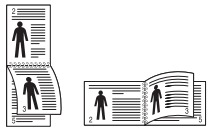
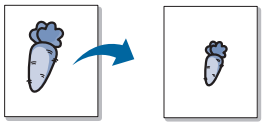
- Some menus may not appear on the display depending on options or models. If so, it is not applicable to your machine.
- Select the **Help** menu or click the ? button from the window or press **F1** on your keyboard and click on any option you want to know about (see "Using help" on page 56).

Item	Description
Multiple Pages per Side 	Selects 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.

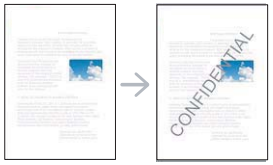
Printing features

Item	Description
Poster Printing 	Prints a single-page document onto 4 (Poster 2x2), 9 (Poster 3x3), or 16 (Poster 4x4) sheets of paper, for the purpose of pasting the sheets together to form one poster-size document. Select the **Poster Overlap** value. Specify **Poster Overlap** in millimeters or inches by selecting the radio button on the upper right of **Basic** tab to make it easier to paste the sheets together. 
Booklet Printing 	Prints your document on both sides of a sheet of paper and arranges the pages so that the paper can be folded in half after printing to produce a booklet. • This option is available only when you use the PCL/SPL printer driver. This option is not available when you use XPS driver. • The **Booklet Printing** option is not available for all paper sizes. Select the available paper **Size** option under the **Paper** tab to see what paper sizes are available. • If you select an unavailable paper size, this option can be automatically canceled. Select only available paper (paper without ⚠ or ⊗ mark).

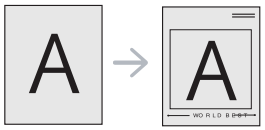
Printing features

Item	Description
Double-sided Printing (Manual)	Print on both sides of a sheet of paper (duplex). Before printing, decide how you want your document oriented. • This option is available only when you use the PCL/SPL printer driver. This option is not available when you use XPS driver. • If your machine does not have a duplex unit, you should complete the printing job manually. The machine prints every other page of the document first. After that, a message appears on your computer. • **Skip Blank Pages** feature does not work when you select the duplex option. • **None:** Disables this feature. • **Long Edge:** This option is the conventional layout used in bookbinding.  • **Short Edge:** This option is the conventional layout used in calendars.  • **Reverse Double-Sided Printing:** Check this option to reverse the print order when duplex printing. This option is not available when you use **Double-sided Printing (Manual)**.
Paper Options 	Changes the size of a document to appear larger or smaller on the printed page by entering in a percentage by which to enlarge or decrease the document.

Printing features

Item	Description
Watermark 	The watermark option allows you to print text over an existing document. For example, you use it when you want to have large gray letters reading "**DRAFT**" or "**CONFIDENTIAL**" printed diagonally across the first page or all pages of a document.
Watermark **(Creating a watermark)**	**a**To change the print settings from your software application, access **Printing Preferences**. **b**Click the **Advanced** tab, select **Edit** from the **Watermark** drop-down list. The **Edit Watermarks** window appears. **c**Enter a text message in the **Watermark Message** box. You can enter up to 256 characters. The message displays in the preview window.
Watermark **(Editing a watermark)**	**a**To change the print settings from your software application, access **Printing Preferences**. **b**Click the **Advanced** tab, select **Edit** from the **Watermark** drop-down list. The **Edit Watermarks** window appears. **c**Select the watermark you want to edit from the **Current Watermarks** list and change the watermark message and options. **d**Click **Update** to save the changes. **e**Click **OK** or **Print** until you exit the **Print** window.
Watermark **(Deleting a watermark)**	**a**To change the print settings from your software application, access **Printing Preferences**. **b**Click the **Advanced** tab, select **Edit** from the **Watermark** drop-down list. The **Edit Watermarks** window appears. **c**Select the watermark you want to delete from the **Current Watermarks** list and click **Delete**. **d**Click **OK** or **Print** until you exit the **Print** window.

Printing features

Item	Description
Overlay 	This option is available only when you use the PCL/SPL printer driver. This option is not available when you use XPS driver 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 letterhead paper. Rather than using preprinted letterhead, you can create an overlay containing exactly the same information that is currently on your letterhead. To print a letter with your company's letterhead, you do not need to load preprinted letterhead paper in the machine: just print the letterhead overlay on your document. To use a page overlay, you must create a new page overlay containing your logo or image. • The overlay document size must be the same as the document you print with the overlay. Do not create an overlay with a watermark. • The resolution of the overlay document must be the same as that of the document you will print with the overlay.
Overlay **(Creating a new page overlay)**	**a**To save the document as an overlay, access **Printing Preferences**. **b**Click the **Advanced** tab, and select **Edit** from the **Text** drop-down list. **Edit Overlay** window appears. **c**In the **Edit Overlay** window, click **Create**. **d**In the **Save As** window, type a name in the **File name** box. Select the destination path, if necessary (The default is C:\Formover). **e**Click **Save**. The name appears on the **Overlay List**. **f**Click **OK** or **Print** until you exit the **Print** window. The file is not printed. Instead, it is stored on your computer hard disk drive.

Item	Description
Overlay **(Using a page overlay)**	**a**Click the **Advanced** tab. **b**Select the desired overlay from the **Text** drop-down list. **c**If the overlay file you want does not appear in the **Text** drop-down list, select **Edit...** from the list and click **Load**. Select the overlay file you want to use. If you have stored the overlay file you want to use in an external source, you can also load the file when you access the **Open** window. After you select the file, click **Open**. The file appears in the **Overlay List** box and is available for printing. Select the overlay from the **Overlay List** box. **d**If necessary, check **Confirm Page Overlay When Printing** box. If this box is checked, a message window appears each time you submit a document for printing, asking you to confirm printing an overlay on your document. If this box is not checked and an overlay has been selected, the overlay automatically prints with your document. **e**Click **OK** or **Print** until you exit the **Print** window.
Overlay **(Deleting a page overlay)**	**a**In the **Printing Preferences** window, click the **Advanced** tab. **b**Select **Edit** in the **Text** drop down list. **c**Select the overlay you want to delete from the **Overlay List** box. **d**Click **Delete**. **e**When a confirming message window appears, click **Yes**. **f**Click **OK** or **Print** until you exit the **Print** window. You can delete page overlays that you no longer use.

Macintosh printing

Some features may not be available depending on models or options. It means that the features are not supported.

Printing features

Printing a document

When you print with a Macintosh, you need to check the printer driver settings in each application you use. Follow the steps below to print from a Macintosh:

1. Open the document to print.
2. Open the **File** menu and click **Page Setup** (**Document Setup** in some applications).
3. Choose your paper size, orientation, scaling, other options, and make sure that your machine is selected. Click **OK**.
4. Open the **File** menu and click **Print**.
5. Choose the number of copies and indicate which pages to print.
6. Click **Print**.

Changing printer settings

You can use advanced printing features when using your machine.

Open an application and select **Print** from the **File** menu. The machine name, which appears in the printer properties window, may differ depending on the machine in use. Except for the name, the composition of the printer properties window is similar to the following.

Printing multiple pages on one sheet

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

1. Open an application, and select **Print** from the **File** menu.
2. Select **Layout** from the drop-down list under **Orientation**. In the **Pages per Sheet** drop-down list, select the number of pages you want to print on one sheet of paper.
3. Select the other options to use.
4. Click **Print**.

   The machine prints the selected number of pages to print on one sheet of paper.

Printing on both sides of the paper

Some features may not be available depending on models or options. It means that the features are not supported (see "Variety feature" on page 9).

Printing features

Before printing in the duplex mode, decide on which edge you will be binding your finished document. The binding options are, as follows:

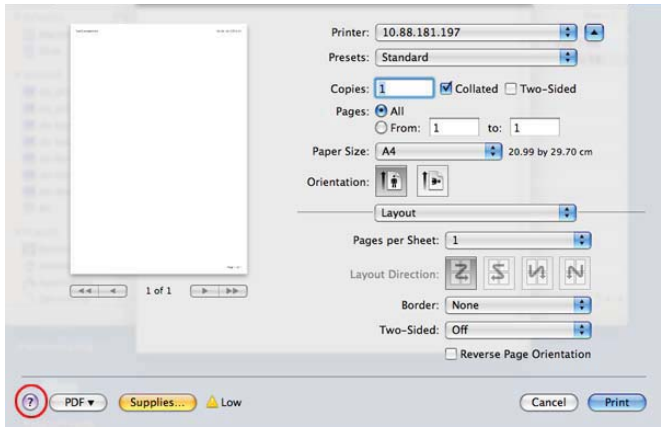
- **Long-Edge Binding:** This option is the conventional layout used in book binding.
- **Short-Edge Binding:** This option is the type often used with calendars.

1. From your Macintosh application, select **Print** from the **File** menu.
2. Select **Layout** from the drop-down list under **Orientation**.
3. Select a binding orientation from the **Two-Sided** option.
4. Select the other options to use.
5. Click **Print** and the machine prints on both sides of the paper.

If you print more than 2 copies, the first copy and the second copy might print on the same sheet of paper. Avoid printing on both sides of paper when you are printing more than 1 copy.

Using help

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



Linux printing

Some features may not be available depending on models or options. It means that the features are not supported.

Printing features

Printing from applications

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

1 Open an application, and 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 print job properties using the following four tabs displayed at the top of the window.

- **General:** Changes the paper size, the paper type, and the orientation of the documents. It enables the duplex feature, adds start and end banners, and changes the number of pages per sheet.

Automatic/manual duplex printing may not be available depending on models. You can alternatively use the lpr printing system or other applications for odd-even printing.

- **Text:** Specifies the page margins and set the text options, such as spacing or columns.
- **Graphics:** Sets image options that are used when printing image files, such as color options, image size, or image position.
- **Advanced:** Sets the print resolution, paper source, and destination.

5 Click **Apply** 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 your machine using the standard CUPS, directly from the command line interface. The CUPS lpr utility allows you to do that, but the driver's package replaces the standard lpr tool by a much more user-friendly LPR GUI program.

To print any document file:

1 Enter 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 machine from the list, and change the print job properties.

3 Click **OK** to start printing.

Printing features

Configuring Printer Properties

Using the **Printer 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 appears.

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 machine port from USB to parallel or vice versa while in use, you must re-configure the machine port in this tab.
- **Driver:** Allows you to view or select another machine 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 machine is in. Click **Add to Class** to add your machine to a specific class or click **Remove from Class** to remove the machine from the selected class.

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

Scan features

- For basic scanning features, refer to the Basic Guide (see "Basic scanning" on page 63).
- This feature may not be available depending on model or optional goods (see "Features by models" on page 7).
- The maximum resolution that can be achieved depends upon various factors, including computer speed, available disk space, memory, the size of the image being scanned, and bit depth settings. Thus, depending on your system and what you are scanning, you may not be able to scan at certain resolutions, especially using enhanced dpi.

Basic scanning method

This feature may not be available depending on model or optional goods (see "Variety feature" on page 9).

You can scan the originals with your machine via an USB cable or the network. The following methodoloqies can be used for scanning your documents:

- **Scan to PC:** Scan the originals from the control panel. Then, the scanned data will be stored in the connected computers **My Documents** folder (see "Basic Scanning" on page 63).
- **TWAIN:** TWAIN is the one of a preset imaging applications. Scanning an image launches the selected application, enabling you to control the scanning process. This feature can be used via the local connection or the network connection (see "Scanning from image editing program" on page 238).
- **Samsung Scan Assistant/Samsung Easy Document Creator:** You can use this program to scan images or documents.

  -See "Scanning with Samsung Scan Assistant" on page 239.

  -See "Using Samsung Easy Document Creator" on page 264.
- **WIA:** WIA stands for Windows Images Acquisition. To use this feature, your computer must be connected directly with the machine via an USB cable (see "Scanning using the WIA driver" on page 238).
- **USB Memory:** You can scan a document and save the scanned image onto an USB memory device.

Scan features

Setting the scan settings in the computer

This feature may not be available depending on model or optional goods (see "Features by models" on page 7).

1. Open **Samsung Easy Printer Manager** (see "Using Samsung Easy Printer Manager" on page 261).
2. Select the appropriate machine from the **Printer List**.
3. Select **Scan to PC Settings** menu.
4. Select the option you want.
   - **Scan Activation:** Determines whether or not scanning is enabled on the device.
   - **Basic** tab**:** Contains settings related to general scan and device settings.
   - **Image** tab**:** Contains settings related to image altering.
5. Press **Save** > **OK**.

Scanning from network connected machine

The machine that does not support the network interface, it will not be able to use this feature (see "Rear view" on page 22).

Make sure the printer driver is installed on your computer using the software CD, since the printer driver includes the scan program (see "Installing the driver locally" on page 30).

1. Place a single document face down on the document glass, or load the documents face up into the document feeder (see "Loading originals" on page 49).
2. Select (**Scan**) > **Scan to PC** > **Network PC** on the control panel.

If you see **Not Available** message, check the port connection.

3. Select your registered computer **ID**, and enter the **Password** if necessary.

Scan features

- **ID** is the same ID as the registered scan ID for **Samsung Easy Printer Manager** > Switch to advanced mode > **Scan to PC Settings**.
- **Password** is the 4 digit number registered password for **Samsung Easy Printer Manager** > Switch to advanced mode > **Scan to PC Settings**.

4 Select the option you want and press **OK**.

5 Scanning begins.

Scanned image is saved in computer's **C:\Users\users name\My Documents**. The saved folder may differ, depending on your operating system or the application you are using.

Scanning from image editing program

You can scan and import documents at the image editing software such as Adobe Photoshop, if the software is TWAIN-compliant. Follow the steps below to scan with TWAIN-compliant software:

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

2 Place a single document face down on the document glass, or load the documents face up into the document feeder (see "Loading originals" on page 49).

3 Open an application, such as Adobe Photoshop.

4 Click **File** > **Import**, and select the scanner device.

5 Set the scan options.

6 Scan and save your scanned image.

Scanning using the WIA driver

Your machine supports the Windows Image Acquisition (WIA) driver for scanning images. WIA is one of the standard components provided by Microsoft Windows 7 and works with digital cameras and scanners. Unlike the TWAIN driver, the WIA driver allows you to scan and easily adjust images without using additional software:

The WIA driver works only on Windows OS (not supported Windows 2000) with a USB port.

Scan features

1. Make sure that the machine is connected to your computer and powered on.
2. Place a single document face down on the document glass, or load the documents face up into the document feeder (see "Loading originals" on page 49).
3. Click **Start** > **Control Panel** > **Hardware and Sound** > **Devices and Printers**.
4. Right-click on device driver icon in **Printers and Faxes** > **Start Scan**.
5. **New Scan** application appears.
6. Choose your scanning preferences and click **Preview** to see your preferences affect the picture.
7. Scan and save your scanned image.

Scanning with Samsung Scan Assistant

You need to download Samsung Scan Assistant software from the Samsung website to install the printer software (http://www.samsung.com > find your product > Support or Downloads).

- For Windows, you need to download Samsung Scan Assistant from the Samsung website to install the printer software (http://www.samsung.com > find your product > Support or Downloads).
- For Macintosh, open the **Application** folder > **Samsung** > **Samsung Scan Assistant**.
- For Windows, you can use the OCR (Optical Character Reader) feature from Samsung Scan Assistant program.

1. From the Samsung website, download the Samsung Scan Assistant software to your computer. Then unpack and install the software.
2. Make sure that the machine is connected to your computer and powered on.
3. Place a single document face down on the document glass, or load the documents face up into the document feeder (see "Loading originals" on page 49).
4. Click **Start** > **All programs** > **Samsung Printers**, and start **Samsung Scan Assistant**.

Select the **Help** menu or click the ? button from the window and click on any option you want to know about.

5. Set the scan options.

6 Click **Scan**.

Macintosh scanning

Scanning from USB connected machine

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

2 Place a single document face down on the document glass, or load the documents face up into the document feeder (see "Loading originals" on page 49).

3 Start **Applications** and click **Image Capture**.

If **No Image Capture device connected** message appears, disconnect the USB cable and reconnect it. If the problem continues, refer to the **Image Capture**'s help.

4 Select the option you want.

5 Scan and save your scanned image.

If scanning does not operate in **Image Capture**, update Mac OS to the latest version. **Image Capture** operates properly in Mac OS X 10.4.7 or higher.

Scanning from network connected machine

Network or wireless model only (see "Features by models" on page 7).

1 Make sure that your machine is connected to a network.

2 Place a single document face down on the document glass, or load the documents face up into the document feeder (see "Loading originals" on page 49).

3 Start **Applications** and click **Image Capture**.

4 According to OS, follow steps below.

•For 10.4

-Click **Devices** > **Browse Devices** on Menu bar.

-Select your machine in Twain devices option. Make sure that **Use TWAIN software** checkbox is checked.

- Click **Connect**.

  If a warning message appears, click **Change Port..** to select port, or If TWAIN UI appears, click **Change Port..** from the **Preference** tab and select a new port.

•For 10.5

-Click **Devices** > **Browse Devices** on Menu bar.

-Make sure that **Connected** checkbox is checked beside your machine in **Bonjour Devices**.

- If you want to scan using TWAIN, refer to the Mac OS X10.4 steps above.

•For 10.6 -10.7, select your device below **SHARED**.

5 Set the scan options on this program.

6 Scan and save your scanned image.

- If scanning does not operate in Image Capture, update Mac OS to the latest version. Image Capture operates properly Mac OS X 10.4.7 or higher.
- For more information, refer to the **Image Capture**'s help.
- You can also scan using TWAIN-compliant software, such as Adobe Photoshop.

Linux scanning

Scanning

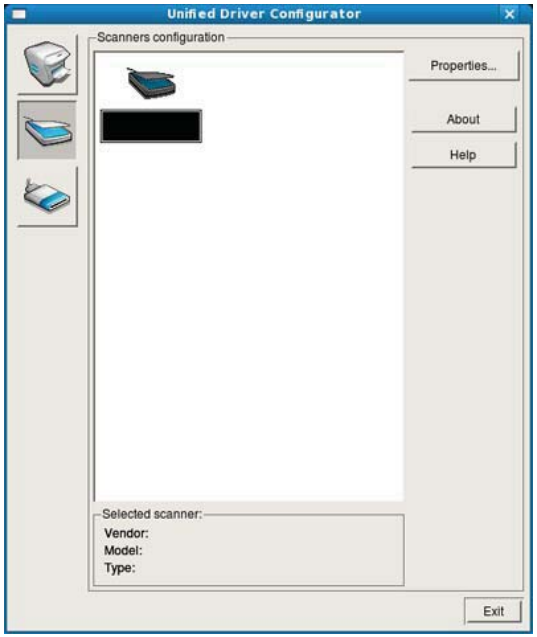
1 Make sure that the machine is connected to your computer and powered on.

2 Double-click the **Unified Driver Configurator** on your desktop.

3 Click the button to switch to Scanners Configuration.

Scan features

4 Select the scanner on the list.

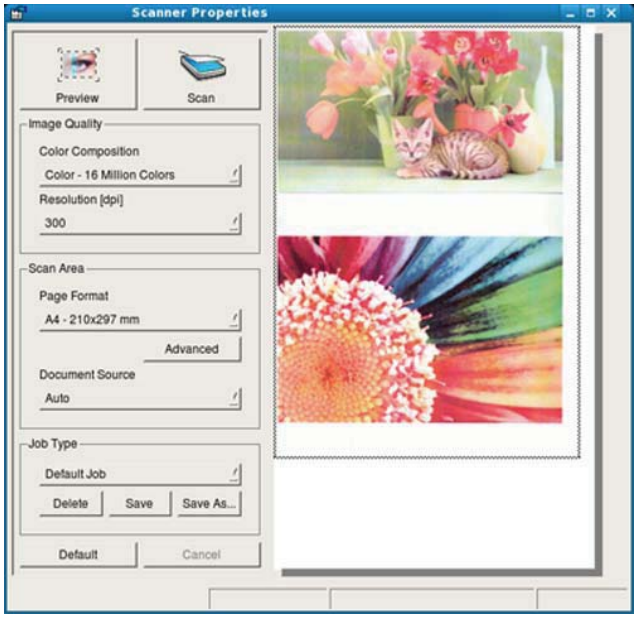


5 Click **Properties**.

6 Place a single document face down on the document glass, or load the documents face up into the document feeder (see "Loading originals" on page 49).

7 From the **Scanner Properties** window, click **Preview**.

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



9 Drag the pointer to set the image area to be scanned in the **Preview Pane**.

10 Select the option you want.

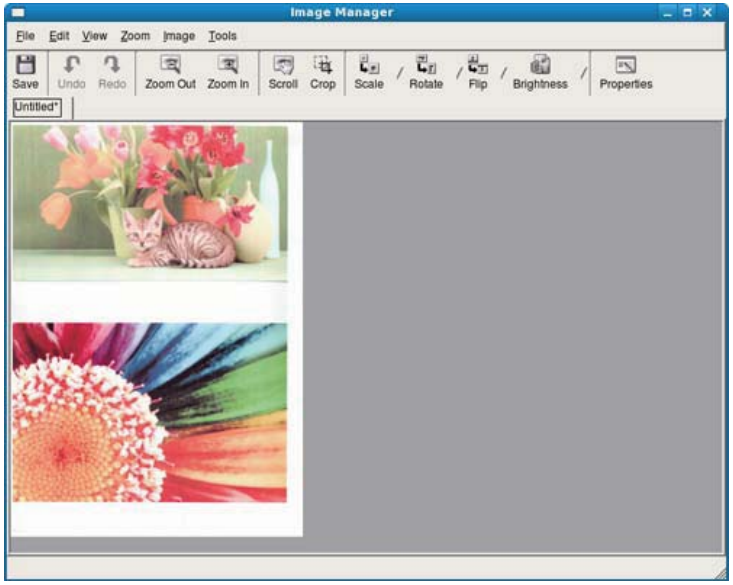
11 Scan and save your scanned image.

For later use, you can save as your scan settings and add it to the **Job Type** drop-down list.

Scan features

Editing an image with Image Manager

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



Fax features

- For basic faxing features, refer to the Basic Guide (see "Basic faxing" on page 64).
- This function is not supported for CLX-330x/CLX-330xW Series (see "Control panel overview" on page 23).

Automatic redialing

When the number you have dialed is busy or there is no answer when you send a fax, the machine automatically redials the number. The redial time depends on the country's factory default setting.

When the display shows **Retry Redial?**, press (**Start**) button to redial the number without waiting. To cancel the automatic redialing, press (**Cancel** or **Stop/Clear**).

To change the time interval between redials and the number of redial attempts.

1. Press (fax) > (**Menu**)> **Fax Setup** > **Sending** on the control panel.
2. Select **Redial Times** or **Redial Term** you want.
3. Select the option you want.

Redialing the fax number

1. Press (**Redial/Pause**) button on the control panel.
2. Select the fax number you want.

   Ten recently sent fax numbers with ten received Caller IDs are shown.
3. When an original is loaded in the document feeder, the machine automatically begins to send.

   If an original is placed on the scanner glass, select **Yes** to add another page. Load another original and press **OK**. When you have finished, select **No** when **Another Page?** appears.

Confirming a transmission

When the last page of your original has been sent successfully, the machine beeps and returns to ready mode.

When something goes wrong while sending your fax, an error message appears on the display. If you receive an error message, press (**Cancel** or **Stop/Clear**) to clear the message and try to send the fax again.

Fax features

You can set your machine to print a confirmation report automatically each time sending a fax is completed. Press (fax) > (**Menu**) > **Fax Setup** > **Sending** > **Send Report** on the control panel.

Sending a fax in the computer

- This feature may not be available depending on model or optional goods (see "Features by models" on page 7).
- To use this feature, set the option on the control panel:

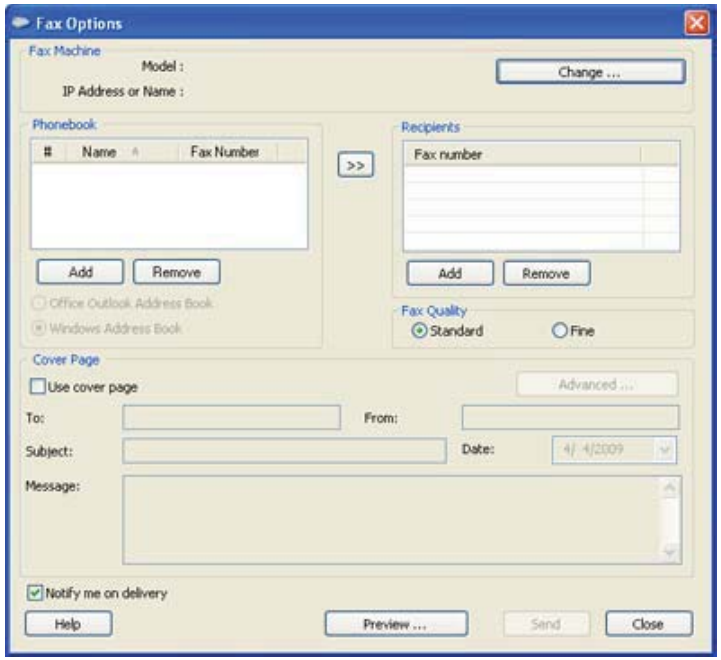
  Press (fax) > (**Menu**) > **Fax Feature** > **Forward** > **PC** > **On** the control panel.

You can send a fax from your computer without going to the machine.

To send a fax from your computer, the **Samsung Network PC Fax** program must be installed. This program will be installed when you installed the printer driver.

1. Open the document to be sent.
2. Select **Print** from the **File** menu.

   The **Print** window will be displayed. It may look slightly different depending on your application.
3. Select **Samsung Network PC Fax** from the **Print** window
4. Click **Print** or **OK**.
5. Enter the recipients' numbers and select the option



Fax features

Select the **Help** menu or click the ? button from the window and click on any option you want to know about.

6 Click **Send**.

Delaying a fax transmission

You can set your machine to send a fax at a later time when you will not be present. You cannot send a color fax using this feature.

1 Place a single document face down on the document glass, or load the documents face up into the document feeder.

2 Press (fax) on the control panel.

3 Adjust the resolution and the darkness to suit your fax needs.

4 Press (**Menu**) > **Fax Feature** > **Delay Send** on the control panel.

5 Enter the number of the receiving fax machine and press **OK**.

6 The display asks you to enter another fax number to send the document.

7 To enter more fax numbers, press **OK** when **Yes** highlights and repeat steps 5.

- You can add up to 10 destinations.
- Once you entered a group dial number, you cannot enter another group dial numbers anymore.

8 Enter the job name and the time.

If you set a time earlier than the current time, the fax will be sent at that time on the following day.

9 The original is scanned into memory before transmission.

The machine returns to ready mode. The display reminds you that you are in ready mode and that a delayed fax is set.

You can check the list of delayed fax jobs.

Press (**Menu**) > **System Setup** > **Report** > **Schedule Jobs** on the control panel.

Fax features

Adding documents to a reserved fax

1. Place a single document face down on the document glass, or load the documents face up into the document feeder.
2. Press (fax) > (**Menu**) > **Fax Feature** > **Add Page** on the control panel.
3. Select the fax job and press **OK**.

   When you have finished, select **No** when **Another Page?** appears. The machine scans the original into memory.
4. Press (**Cancel** or **Stop/Clear**) to return to ready mode.

Canceling a reserved fax job

1. Press (fax) > (**Menu**) > **Fax Feature** > **Cancel Job** on the control panel.
2. Select the fax job you want and press **OK**.
3. Press **OK** when **Yes** highlights.

   The selected fax is deleted from memory.
4. Press (**Stop/Clear**) to return to ready mode.

Sending a priority fax

This function is used when a high priority fax need to be sent ahead of reserved operations. The original is scanned into memory and immediately transmitted when the current operation is finished.

1. Place a single document face down on the document glass, or load the documents face up into the document feeder.
2. Press **(Fax)** > (**Menu**) > **Fax Feature** > **Priority Send** on the control panel.
3. Enter the destination fax number and press **OK**.
4. Enter the job name and press **OK**.
5. If an original is placed on the scanner glass, select **Yes** to add another pages. Load another original and press **OK**.

   When you have finished, select **No** when **Another Page?** appears.

   The machine starts to scan and send a fax to destinations.

Fax features

Forwarding a sent fax to another destination

You can set the machine to forward the received or sent fax to other destination by a fax, an email or a server. If you are out of office but have to receive the fax, this feature may be useful.

1. Place a single document face down on the document glass, or load the documents face up into the document feeder.
2. Press (fax) > (**Menu**) > **Fax Feature** > **Send Forward** > **Forward to Fax** > **On** on the control panel.

Forward options may not be available depending on model or optional goods (see "Variety feature" on page 9).

3. Enter the destination fax number, email address, or server address and press **OK**.
4. Press (**Cancel** or **Stop/Clear**) to return to ready mode.

   Subsequent sent faxes will be forwarded to the specified fax machine.

Forwarding a received fax

You can set the machine to forward the received or sent fax to other destination by a fax, an email or a server. If you are out of office but have to receive the fax, this feature may be useful.

1. Press (fax) > (**Menu**) > **Fax Feature** > **Receive Forward** or **RCV Forward** >**Forward to Fax** or **Forward to PC** > **Forward** on the control panel.

- **Forward** options may not be available depending on model or optional goods (see "Variety feature" on page 9).
- To set the machine to print out a fax when fax forwarding has been completed, select **Forward&Print**.

2. Enter the destination fax number, email address, or server address and press **OK**.
3. Enter the starting tim and ending time, then press **OK**.
4. Press (**Cancel** or **Stop/Clear**) to return to ready mode.

   Subsequent sent faxes will be forwarded to the specified fax machine.

Fax features

Receiving a fax in the computer

- This feature may not be available depending on model or optional goods (see "Features by models" on page 7).
- To use this feature, set the option on the control panel:

  Press (fax) > (**Menu**) > **Fax Feature** > **Rcv. Forward** > **Forward to PC** > **Forward** the control panel.

1 Open the Samsung Easy Printer Manager.

2 Select the appropriate machine from the **Printer List**.

3 Select **Fax to PC Settings** menu.

4 Use **Enable Fax Receiving from Device** to change the fax settings.

- **Image Type:** Convert the received faxes to PDF or TIFF.
- **Save Location:** Select location to save the converted faxes.
- **Prefix:** Select prefix.
- **Print received fax:** After receiving the fax, set prints information for the received fax.
- **Notify me when complete:** Set to show the popup window to notify receiving a fax.
- **Open with default application:** After receiving the fax, open it with default application.
- **None:** After receiving a fax, the machine does not notify the user or opens the application.

5 Press **Save** > **OK**.

Changing the receive modes

1 Press (fax) > (**Menu**) > **Fax Setup** > **Receiving** > **Receive Mode** on the control panel.

2 Select the option you want.

- **Fax:** Answers an incoming fax call and immediately goes into the fax reception mode.
- **Tel:** Receives a fax by pressing (**On Hook Dial**) and then (**Start**) button.
- **Ans/Fax:** Is for when an answering machine attached to your machine. Your machine answers an incoming call, and the caller can leave a message on the answering machine. If the fax machine senses a fax tone on the line, the machine automatically switches to Fax mode to receive the fax.

Fax features

To use the **Ans/Fax** mode, attach an answering machine to the EXT socket on the back of your machine.

- **DRPD:** You can receive a call using the Distinctive Ring Pattern Detection (DRPD) feature. Distinctive Ring is a telephone company service which enables an user to use a single telephone line to answer several different telephone numbers. For further details, see "Receiving faxes using DRPD mode" on page 251.

This setting may not be available depending on your country.

3 Press **OK**.

4 Press (**Cancel** or **Stop/Clear**) to return to ready mode.

Receiving manually in Tel mode

You can receive a fax call by pressing (**On Hook Dial**) button and then pressing (**Start**) when you hear a fax tone. If your machine has a handset, you can answer calls using the handset (see "Features by models" on page 7).

Receiving in Answering Machine/Fax mode

To use this mode, you must attach an answering machine to the EXT socket on the back of your machine. If the caller leaves a message, the answering machine stores the message. If your machine detects a fax tone on the line, it automatically starts to receive the fax.

- If you have set your machine to this mode and your answering machine is switched off, or no answering machine is connected to EXT socket, your machine automatically goes into Fax mode after a predefined number of rings.
- If the answering machine has a user-selectable ring counter, set the machine to answer incoming calls within 1 ring.
- If the machine is in Tel mode, disconnect or switch off the answering machine with the fax machine. Otherwise, the outgoing message from the answering machine will interrupt your phone conversation.

Receiving faxes with an extension telephone

When you are using an extension telephone connected to the EXT socket, you can receive a fax from someone you are talking to on the extension telephone, without going to the fax machine.

When you receive a call on the extension phone and hear fax tones, press the keys ***9*** on the extension phone. The machine receives the fax.

Fax features

9 is the remote receive code preset at the factory. The first and the last asterisks are fixed, but you can change the middle number to whatever you want.

While you are talking over the telephone connected to the EXT socket, copy and scan features are not available.

Receiving faxes using DRPD mode

This setting may not be available depending on your country. Distinctive Ring is a telephone company service which enables an user to use a single telephone line to answer several different telephone numbers. This feature is often used by answering services who answer telephones for many different clients and need to know which number someone is calling in on to properly answer the phone.

This setting may not be available depending on your country.

1. Select (fax) > (**Menu**) > **Fax Setup** > **Receiving** > **DRPD Mode** > **Waiting Ring** on the control panel.
2. Call your fax number from another telephone.
3. When your machine begins to ring, do not answer the call. The machine requires several rings to learn the pattern.

   When the machine completes learning, the display shows **Completed DRPD Setup**. If the DRPD setup fails, **Error DRPD Ring** appears.
4. Press **OK** when DRPD appears and start over from step 2.

- DRPD must be set up again if you re-assign your fax number, or connect the machine to another telephone line.
- After DRPD has been set up, call your fax number again to verify that the machine answers with a fax tone. Then have a call placed to a different number assigned to that same line to be sure the call is forwarded to the extension telephone or answering machine plugged into the EXT socket.

Receiving in secure receiving mode

This feature may not be available depending on model or optional goods (see "Features by models" on page 7).

You may need to prevent your received faxes from being accessed by unauthorized people. Turn on secure receiving mode, then all incoming faxes go into memory. You can print the incoming faxes with entering the password.

Fax features

To use the secure receiving mode, activate the menu from (fax) > (**Menu**) > **Fax Feature** > **Secure Receive** on the control panel.

Printing received faxes

1. Select (fax) > (**Menu**) > **Fax Feature** > **Secure Receive** > **Print** on the control panel.
2. Enter a four-digit password and press **OK**.
3. The machine prints all of the faxes stored in memory.

Receiving faxes in memory

Since your machine is a multi-tasking device, it can receive faxes while you are making copies or printing. If you receive a fax while you are copying or printing, your machine stores incoming faxes in its memory. Then, as soon as you finish copying or printing, the machine automatically prints the fax.

If fax is received and being printed, other copy and print jobs cannot be processed at the same time.

Printing sent fax report automatically

You can set the machine to print a report with detailed information about the previous 50 communication operations, including time and dates.

1. Press (fax) > (**Menu**) > **Fax Setup** > **Auto Report** > **On** on the control panel.
2. Press (**Cancel** or **Stop/Clear**) to return to ready mode.

5. Useful Management Tools

This chapter introduces management tools provided to help you make full use of your machine.

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- Samsung Easy Color Manager 255
- Samsung AnyWeb Print 256
- Easy Eco Driver 257
- Using SyncThru™ Web Service 258
- Using Samsung Easy Printer Manager 261
- Using Samsung Easy Document Creator 264
- Using Samsung Printer Status 269
- Using the Linux Unified Driver Configurator 271

Easy Capture Manager

- This feature may not be available depending on model or optional goods (see "Software" on page 7).
- Available for Windows OS users only (see "Software" on page 7).

Capture your screen and launch Easy Capture Manager by simply pressing the Print Screen key. Now you can easily print your captured screen as captured or edited.

Samsung Easy Color Manager

Samsung Easy Color Manager helps users do fine adjustments with 6 color tones and other properties, such as brightness, contrast, and saturation. Color tone changes can be saved as a profile and can be used from the driver or from inside of the machine.

- This feature may not be available depending on model or optional goods (see "Software" on page 7).
- Available for Windows and Macintosh OS users only (see "Software" on page 7).

Helps Samsung color laser printer users to adjust color as they like.

To download the latest Samsung Easy Color Manager, go to the Samsung website:

Start > **All programs** > **Samsung Printers** > **Samsung Easy Color Manager** > **Download the latest version**.

OR

Helps Samsung color laser printer users to adjust color as they like. (http://solution.samsungprinter.com/personal/colormanager)

Samsung AnyWeb Print

- This feature may not be available depending on model or optional goods (see "Software" on page 7).
- Available for Windows and Macintosh OS users only (see "Software" on page 7).

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

Easy Eco Driver

- This feature may not be available depending on model or optional goods (see "Software" on page 7).
- Available for Windows OS users only (see "Software" on page 7).

With the Easy Eco Driver, you can apply Eco features to save paper and toner before printing. To use this application, **Start Easy Eco Driver before printing job** checkbox in the printer properties should be checked.

Easy Eco Driver also allows you simple editing such as removing images and texts, changing font's attribute, and more. You can save frequently used settings as a preset.

How to use:

1. Open a document to print.
2. Print the document.

   A preview window appears.
3. Select the options you want to apply to the document.

   You can see the preview of the applied features.
4. Click **Print**.

Using SyncThru™ Web Service

- Internet Explorer 6.0 or higher is the minimum requirement for SyncThru™ Web Service.
- SyncThru™ Web Service explanation in this user's guide may differ from your machine depending on its options or models.
- Network model only (see "Software" on page 7).

Accessing SyncThru™ Web Service

1 Access a web browser, such as Internet Explorer, from Windows.

Enter the machine IP address of your printer (http://xxx.xxx.xxx.xxx) in the address field and press the Enter key or click **Go**.

2 Your machine's embedded website opens.

Logging into SyncThru™ Web Service

Before configuring options in SyncThru™ Web Service, you need to log-in as an administrator. You can still use SyncThru™ Web Service without logging in but you won't have access to **Settings** tab and **Security** tab.

1 Click **Login** on the upper right of the SyncThru™ Web Service website.

2 If it's your first time logging into **SyncThru™ Web Service** you need to log-in as an administrator. Type in the below default **ID** and **Password**. We recommend you to change the default password for security reasons.

•ID: admin

•Password: sec00000

SyncThru™ Web Service overview

Some tabs may not appear depending on your model.

Using SyncThru™ Web Service

Information tab

This tab gives you general information about your machine. You can check things, such as remaining amount of toner. You can also print reports, such as an error report.

- **Active Alerts:** Shows the alerts that have occurred in the machine and their severity.
- **Supplies:** Shows how many pages are printed and amount of toner left in the cartridge.
- **Usage Counters:** Shows the usage count by print types: simplex and duplex.
- **Current Settings:** Shows the machine's and network's information.
- **Print information:** Prints reports such as system related reports, e-mail address, and font reports.

Settings tab

This tab allows you to set configurations provided by your machine and network. You need to log-in as an administrator to view this tab.

- **Machine Settings** tab**:** Sets options provided by your machine.
- **Network Settings** tab**:** Shows options for the network environment. Sets options such as TCP/IP and network protocols.

Security tab

This tab allows you to set system and network security information. You need to log-in as an administrator to view this tab.

- **System Security:** Sets the system administrator's information and also enables or disables machine features.
- **Network Security:** Sets settings for IPv4/IPv6 filtering and Authentication servers.

Maintenance tab

This tab allows you to maintain your machine by upgrading firmware and setting contact information for sending emails. You can also connect to Samsung website or download drivers by selecting the **Link** menu.

- **Firmware Upgrade:** Upgrade your machine's firmware.
- **Contact Information:** Shows the contact information.
- **Link:** Shows links to useful sites where you can download or check information.

Setting the system administrator's information

This setting is necessary for using the e-mail notification option.

Using SyncThru™ Web Service

Some menus may not appear in the display depending on options or models. If so, it is not applicable to your machine.

1 Start a web browser, such as Internet Explorer, from Windows.

Enter the machine IP address (http://xxx.xxx.xxx.xxx) in the address field and press the Enter key or click **Go**.

2 Your machine's embedded website opens.

3 From the **Security** tab, select **System Security** > **System Administrator**

4 Enter the name of the administrator, phone number, location, and email address.

5 Click **Apply**.

Using Samsung Easy Printer Manager

- This feature may not be available depending on model or optional goods (see "Software" on page 7).
- Available for Windows and Macintosh OS users only (see "Software" on page 7).
- For Windows, Internet Explorer 6.0 or higher is the minimum requirement for Samsung Easy Printer Manager.

Samsung Easy Printer Manager is an application that combines Samsung machine settings into one location. Samsung Easy Printer Manager combines device settings as well as printing environments, settings/actions and launching. All of these features provide a gateway to conveniently use your Samsung machine. Samsung Easy Printer Manager provides two different user interfaces for the user to choose from: the basic user interface and the advanced user interface. Switching between the two interfaces is easy: just click a button.

Understanding Samsung Easy Printer Manager

To open the program:

For Windows,

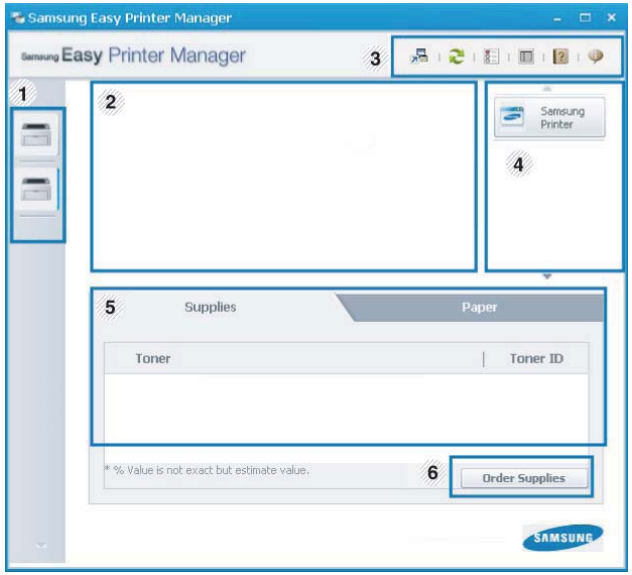
Select **Start** > **Programs** or **All Programs** > **Samsung Printers** > **Samsung Easy Printer Manager** > **Samsung Easy Printer Manager**.

For Macintosh,

Open the **Applications** folder > **Samsung** folder > **Samsung Easy Printer Manager**.

The Samsung Easy Printer Manager interface is comprised of various basic sections as described in the table that follows:

The screenshot may differ depending on operating system you are using.



1	Printer list	The Printer List displays printers installed on your computer and network printers added by network discovery (Windows only).

Using Samsung Easy Printer Manager

2	Printer information	This area gives you general information about your machine. You can check information, such as the machine's model name, IP address (or Port name), and machine status. You can view the online **User's Guide**. **Troubleshooting button:** This button opens the **Troubleshooting Guide** when an error occurs. You can directly open the necessary section in the user's guide.
3	Application information	Includes links for changing to the advanced settings, preference, help, and about. The button is used to change the user interface to the **advanced settings user interface** (see "Advanced settings user interface overview" on page 262).
4	Quick links	Displays **Quick links** to machine specific functions. This section also includes links to applications in the advanced settings. If you connect your machine to a network, the SyncThru™ Web Service icon is enabled.
5	Contents area	Displays information about the selected machine, remaining toner level, and paper. The information will vary based on the machine selected. Some machines do not have this feature.
6	Order supplies	Click on the **Order** button from the supply ordering window. You can order replacement toner cartridge(s) from online.

Select the **Help** menu or click the button from the window and click on any option you want to know about.

Advanced settings user interface overview

The advanced user interface is intended to be used by the person responsible for managing the network and machines.

Using Samsung Easy Printer Manager

Some menus may not appear in the display depending on options or models. If so, it is not applicable to your machine.

Device Settings

You can configure various machine settings such as machine setup, paper, layout, emulation, network, and print information.

Scan to PC Settings

This menu includes settings to create or delete scan to PC profiles.

- **Scan Activation:** Determines whether or not scanning is enabled on the device.
- **Basic** tab**:** Contains settings related general scan and device settings.
- **Image** tab**:** Contains settings related to image altering.

Fax to PC Settings

This menu includes settings related to the basic fax functionality of the selected device.

- **Disable:** If **Disable** is **On**, incoming faxes will not be received on this device.
- **Enable Fax Receiving from Device:** Enables faxing on the device and allow more options to be set.

Alert Settings (Windows only)

This menu includes settings related to error alerting.

- **Printer Alert:** Provides settings related to when alerts will be received.
- **Email Alert:** Provides options relating to receiving alerts via email.
- **Alert History:** Provides a history of device and toner related alerts.

Job Accounting

Provides querying of quota information of the specified job accounting user. This quota information can be created and applied to devices by job accounting software such as SyncThru™ or CounThru™ admin software.

Using Samsung Easy Document Creator

Samsung Easy Document Creator is an application to help users scan, compile, and save documents in multiple formats, including .epub format. These documents can be shared via social networking sites or fax. Whether you're a student needing to organize research from the library or a stay-at-home mom sharing scanned pictures from last year's birthday party, Easy Document Creator will provide you with the necessary tools.

- Availabe for Windows OS users only.
- Windows XP or higher and Internet Explorer 6.0 or higher is the minimum requirement for Samsung Easy Document Creator.
- Samsung Easy Document Creator is installed automatically when you install the machine software.

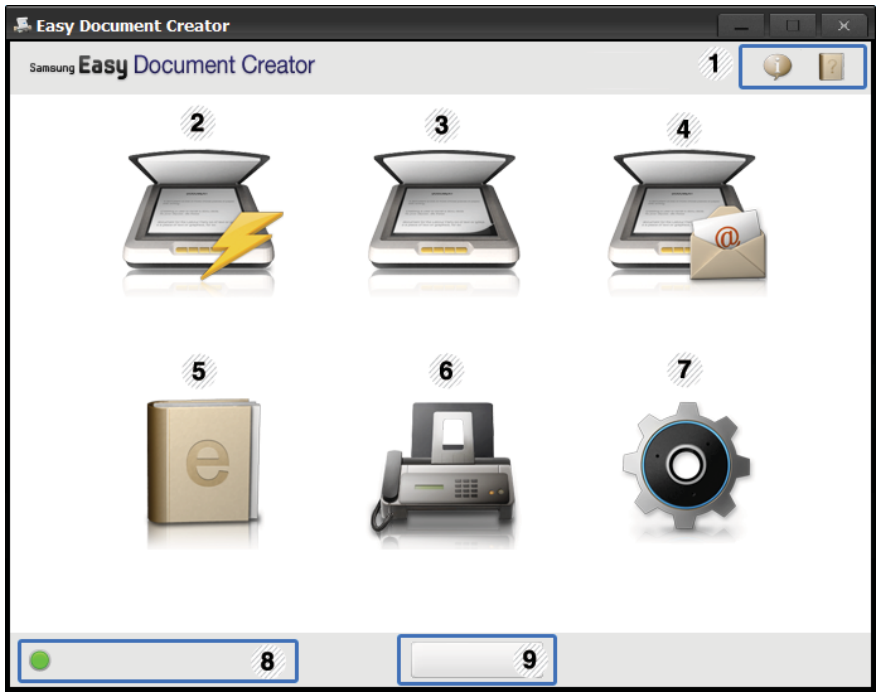
Understanding Samsung Easy Document Creator

To open the program:

Select **Start** > **Programs** or **All Programs** > **Samsung Printers** > **Samsung Easy Document Creator** > **Samsung Easy Document Creator**.

The Samsung Easy Document Creator interface is comprised of various basic sections as described in the table that follows:

The screenshot may differ depending on operating system you are using.



1	(**Information**)	Click the information button to see the program's version information.
	(**Help**)	Click the help button to get the information of any option you want to use.

Using Samsung Easy Document Creator

2	**Quick Scan**	Automatically scans with the settings provided in Configuration. You can pre-set the options such as image type, document size, resolution, or file type (see "Quick Scanning" on page 266).
3	**Scan**	Provides more in-depth options for scanning documents on a one-by-one basis (see "Scanning" on page 266). Text Converting will only be available after installing the optical character recognition (OCR) software proivided in a separate installation file. • **Image Scanning:** Use for scanning single or mulitple pictures. • **Document Scanning:** Use for scanning documents with text or text and images. • **Text Converting:** Use for scanning documents that need to be saved in an editable text format. • **Book Scanning:** Use for scanning books with the flatbed scanner. • **Favorites:** User-created favorites for frequently-used scan settings.
4	**SNS Upload**	Provides an easy and quick way to upload files to a variety of social networking sites (SNS). Scan an image directly or select an existing image to upload to Facebook, Flickr, Picasa, Google Docs, or Twitter (see "Scanning to a Social Networking Site" on page 267). SNS Upload will only be available after Microsoft®.NET Framework 3.5 Service Pack 1 has been installed (http://www.microsoft.com/download/en/details.aspx?id=22) and Windows XP or higher and Internet Explorer 7.0 or higher are required
5	**E-Book Conversion**	Provides the ability to scan multiple documents in as one e-book or convert existing files into an e-book format (.epub file) (see "Converting to an E-Book" on page 267).
6	**Send Fax**	Provides the ability to directly fax a document from Easy Document Creator if the Samsung Network PC Fax driver is installed (see "Sending a fax in the computer" on page 245). If the Samsung Network PC Fax driver is not installed, this will be grayed out.
7	**Configuration**	Provides the options for a **Common** and **Quick Scan**.
8	**Device Name**	Shows the scanning/faxing device ready to use.

Using Samsung Easy Document Creator

9	**Search**	If you cannot see any device ready to use, click this button to find a device. Click **Search Now** to automatically search for all devices to which you have access.

Click the Help (?) button from the upper-right corner of the window and click on any option you want to know about.

Using features

Scanning

1. Place a single document face down on the document glass, or load the documents face up into the document feeder (see "Loading originals" on page 49).
2. Click **Scan** from the home screen.
3. Select the type of scanning or a favorites then click **Start**.
4. Make adjustments to the image (**Scan Settings** and **More Options**).
5. Click **Scan** to scan a final image or **Prescan** to get another preview image.
6. Select to **Save to Location**, **Send to E-mail**, or **Send to SNS**.
7. Click on **Save** (Saving a Scan), **Send** (E-mailing a Scan), or **Share** (Uploading).

If there is room on the document glass, more than one item can be scanned at the same time. Use the tool to make multiple selection areas.

Quick Scanning

Configuring Quick Scan

To set up the Quick Scan options:

1. Click **Configuration** from the home screen.
2. Click on **Default** to use the default settings, or select your own options.
3. Click **Apply** to save changes.

Using Samsung Easy Document Creator

Using Quick Scan

1. Place a single document face down on the document glass, or load the documents face up into the document feeder (see "Loading originals" on page 49).
2. Click **Quick Scan** from the home screen.
3. Select a save location for the scanned images.
4. Click **Save** to save the image.

Click **Scan More** to scan another image with the same settings.

Scanning to a Social Networking Site

Scan Directly

1. Place a single document face down on the document glass, or load the documents face up into the document feeder (see "Loading originals" on page 49).
2. Click **SNS Upload** from the home screen.
3. Click **Scan to SNS** > **Start**.
4. Click **Scan**.

Upload Existing File

1. Click **SNS Upload** from the home screen.
2. Click **Existing File to SNS** > **Start**.
3. Select the site and click **Add Image** to find the file to upload.
4. Select a social networking site to send the image and click **Next**.
5. Follow the instructions in each social networking site.

If there are some problems on accessing or uploading to each SNS site due to a network environment issue, it's needed to check security limitations established in your network with network administrator. To guarantee correct functioning of SNS upload in Samsung Easy Document Creator, unrestricted network environment is needed for HTTPS communication.

Converting to an E-Book

Scan Directly

1. Place a single document face down on the document glass, or load the documents face up into the document feeder (see "Loading originals" on page 49).
2. Click **E-Book Conversion** from the home screen.

Using Samsung Easy Document Creator

3 Click **Scan to E-Book** > **Start**.

4 Enter a name and author to be used as metatag information for the **.epub** file, a file name, and select a save location.

5 Click **Save**.

Convert Existing Files

1 Click **E-Book Conversion** from the home screen.

2 Click **Existing File to E-Book** > **Start**.

3 Click **Add Image** to find the file to convert.

4 Enter a name and author to be used as metatag information for the **.epub** file, a file name, and select a save location.

5 Click **Save**.

Sending a Fax

1 Click **Send Fax** from the home screen.

2 Click add file and locate the file to fax.

3 Click **Send Fax**.

4 Enter the fax information (recipient's number, cover page information, etc).

5 Click **Send**.

Plug-ins

Easy Document Creator will also create new plug-ins for Microsoft PowerPoint, Word, and Excel. These new plug-ins will be in a new Easy Document Creator menu on the applications' menu bars: **Scan to Office**, **Send Fax**, and **E-Book**.

Using Samsung Printer Status

The Samsung Printer Status is a program that monitors and informs you of the machine status.

- The Samsung Printer Status window and its contents shown in this user's guide may differ depending on the machine or operating system in use.
- Check the operating system(s) that are compatible with your machine (see "Specifications" on page 115).
- Available for Windows OS users only (see "Software" on page 7).

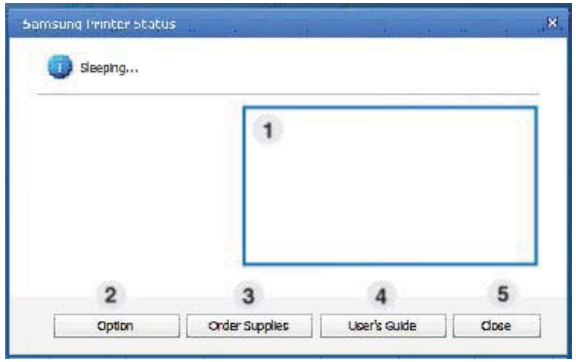
Samsung Printer Status overview

If an error occurs while operating, you can check the error from the Samsung Printer Status. Samsung Printer Status is installed automatically when you install the machine software.

You can also launch Samsung Printer Status manually. Go to the **Printing Preferences**, click the **Basic** tab > **Printer Status** button.

These icons appear on the Windows task bar:

Icon	Mean	Description
	Normal	The machine is in ready mode and experiencing no errors or warnings.
	Warning	The machine is in a state where an error might occur in the future. For example, it might be in toner low status, which may lead to toner empty status.
	Error	The machine has at least one error.



1	**Toner Level**	You can view the level of toner remaining in each toner cartridge. The machine and the number of toner cartridge(s) shown in the above window may differ depending on the machine in use. Some machines do not have this feature.
2	**Option**	You can set printing job alert related settings.

Using Samsung Printer Status

3	**Order Supplies**	You can order replacement toner cartridge(s) from online.
4	**User's Guide**	You can view the online User's Guide. This button opens the **Troubleshooting Guide** when an error occurs. You can directly open the troubleshooting section in the user's guide.
5	**Close**	Close the window.

Using the Linux Unified Driver Configurator

The Unified Driver Configurator is a tool primarily intended for configuring machine devices. You need to install Unified Linux Driver to use Unified Driver Configurator (see "Installation for Linux" on page 144).

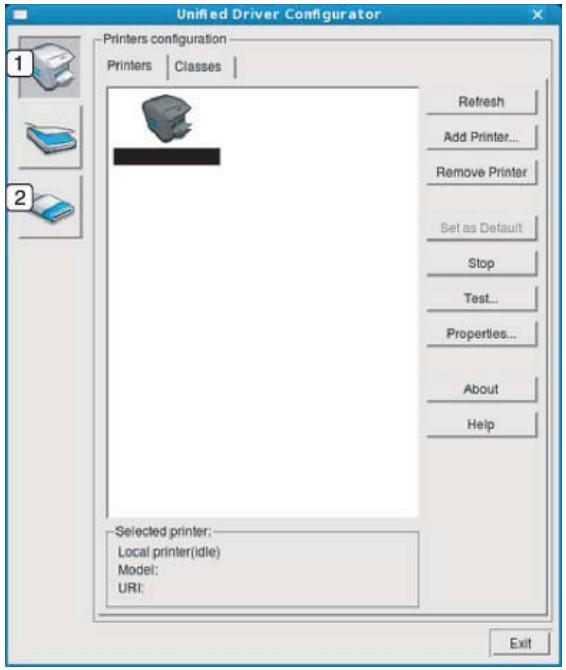
After the driver is installed on your Linux system, the Unified Driver Configurator icon will automatically be created on your desktop.

Opening Unified Driver Configurator

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

You can also click the **Startup** Menu icon and select **Samsung Unified Driver** > **Unified Driver Configurator**.

2 Click each button on the left to switch to the corresponding configuration window.



1 **Printer Configuration**
2 **Port Configuration**

Using the Linux Unified Driver Configurator

To use the on screen help, the **Help** or ? button from the window.

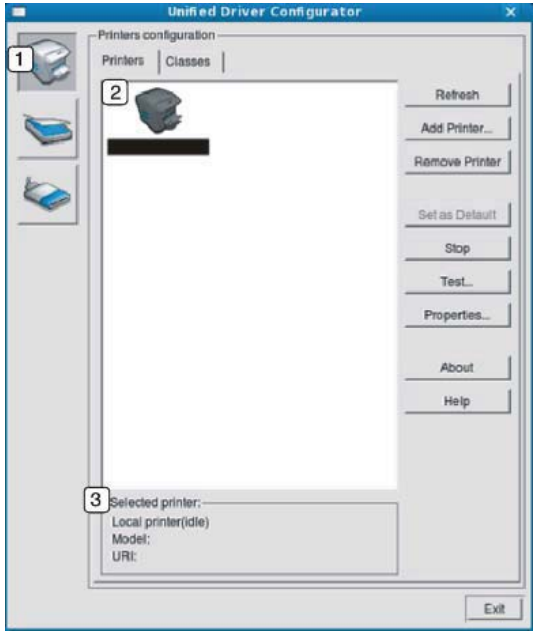
3 After changing the configurations, click **Exit** to close the **Unified Driver Configurator**.

Printers configuration

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

Printers tab

View the current system's printer configuration by clicking on the machine icon button on the left side of the **Unified Driver Configurator** window.



1	Switches to **Printers configuration**.
2	Shows all of the installed machines.
3	Shows the status, model name, and URI of your machine.

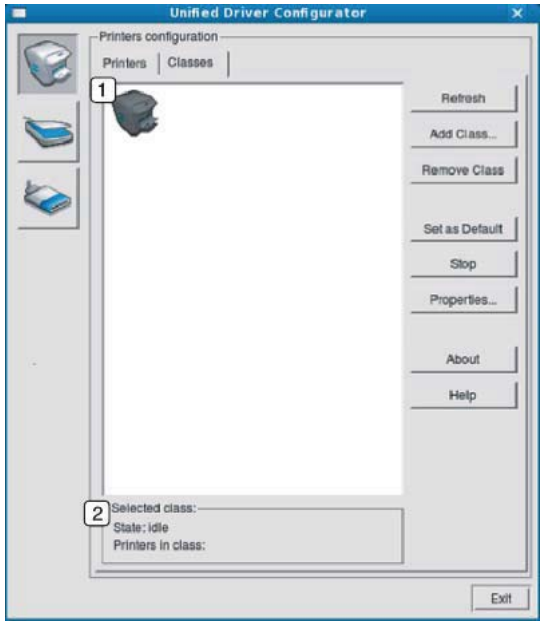
Using the Linux Unified Driver Configurator

The printer control buttons are, as follows:

- **Refresh:** Renews the available machines list.
- **Add Printer:** Allows you to add a new machines.
- **Remove Printer:** Removes the selected machine.
- **Set as Default:** Sets the current selected machine as a default machine.
- **Stop/Start:** Stops/starts the machine.
- **Test:** Allows you to print a test page to ensure the machine is working properly.
- **Properties:** Allows you to view and change the printer's properties.

Classes tab

The Classes tab shows a list of available machine classes.



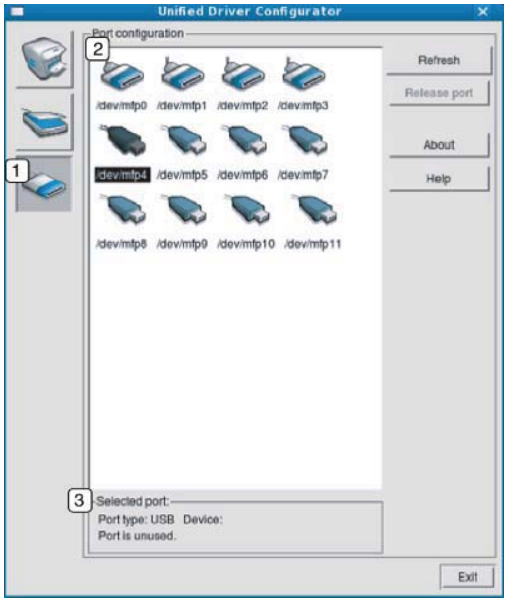
1	Shows all of the machine classes.
2	Shows the status of the class and the number of machines in the class.

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

Using the Linux Unified Driver Configurator

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 a busy state when its owner has terminated the job for any reason.



1	Switches to **Ports configuration**.
2	Shows all of the available ports.
3	Shows the port type, device connected to the port, and status.

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

6. Troubleshooting

This chapter gives helpful information for what to do if you encounter an error.

- Paper feeding problems 276
- Power and cable connecting problems 277
- Printing problems 278
- Printing quality problems 282
- Copying problems 290
- Scanning problems 291
- Faxing problems 293
- Operating system problems 295

For errors that occur during the wireless software installation and settings, refer to the troubleshotting section in the wireless setting chapter (see "Troubleshooting" on page 189).

Paper feeding problems

Condition	Suggested solutions
Paper jams during printing.	Clear the paper jam.
Paper sticks together.	• Check the maximum paper capacity of the tray. • Make sure that you are using the correct type of paper. • Remove paper from the tray and flex or fan the paper. • Humid conditions may cause some paper to stick together.
Multiple sheets of paper do not feed.	Different types of paper may be stacked in the tray. Load paper of only one type, size, and weight.
Paper does not feed into the machine.	• Remove any obstructions from inside the machine. • Paper has not been loaded correctly. Remove paper from the tray and reload it 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 the specifications required by the machine.
The paper keeps jamming.	• There is too much paper in the tray. Remove excess paper from the tray. If you are printing on special materials, use the manual feeding in tray. • An incorrect type of paper is being used. Use only paper that meets the specifications required by the machine. • There may be debris inside the machine. Open the front cover and remove any debris.

Power and cable connecting problems

Click this link to open an animation about solving power problems.

Condition	Suggested solutions
The machine is not receiving power, **or the connection cable between the computer and the machine is not connected properly.**	• Connect the machine to the electricity supply first. If the machine has a (**Power/Wakeup**) button on the control, press it. • Disconnect the machine's cable and reconnect it.

Printing problems

Condition	Possible cause	Suggested solutions
The machine does not print.	The machine is not receiving power.	Connect the machine to the electricity supply first. If the machine has a (**Power/ Wakeup**) button on the control, press it.
	The machine is not selected as the default machine.	Select your machine as your default machine in Windows.
	Check the machine for the following: • The cover is not closed. Close the cover. • Paper is jammed. Clear the paper jam (see "Clearing paper jams" on page 102). • No paper is loaded. Load paper (see "Loading paper in the tray" on page 42). • The toner cartridge is not installed. Install the toner cartridge (see "Replacing the toner cartridge" on page 81). • Make sure the protect cover and sheets are removed from the toner cartridge (see "Replacing the toner cartridge" on page 81). If a system error occurs, contact your service representative.	
	The connection cable between the computer and the machine is not connected properly.	Disconnect the machine cable and reconnect it (see "Rear view" on page 22).
	The connection cable between the computer and the machine is defective.	If possible, attach the cable to another computer that is working properly and print a job. You can also try using a different machine cable.
	The port setting is incorrect.	Check the Windows printer settings to make sure that the print job is sent to the correct port. If the computer has more than one port, make sure that the machine is attached to the correct one.

Printing problems

Condition	Possible cause	Suggested solutions
The machine does not print.	The machine may be configured incorrectly.	Check the **Printing Preferences** to ensure that all of the print settings are correct.
	The printer driver may be incorrectly installed.	Uninstall and reinstall the machine's driver.
	The machine is malfunctioning.	Check the display message on the control panel to see if the machine is indicating a system error. Contact a service representative.
	The document size is so big that the hard disk space of the computer is insufficient to access the print job.	Get more hard disk space and print the document again.
	The output tray is full.	Once the paper is removed from the output tray, the machine resumes printing.
The machine selects print materials from the wrong paper source.	The paper option that was selected in the **Printing Preferences** may be incorrect.	For many software applications, the paper source selection is found under the **Paper** tab within the **Printing Preferences** (see "Opening printing preferences" on page 55). Select the correct paper source. See the printer driver help screen (see "Using help" on page 56).
A print job is extremely slow.	The job may be very complex.	Reduce the complexity of the page or try adjusting the print quality settings.
Half the page is blank.	The page orientation setting may be incorrect.	Change the page orientation in your application (see "Opening printing preferences" on page 55). See the printer driver help screen (see "Using help" on page 56).
	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 (see "Opening printing preferences" on page 55).
The machine prints, but the text is wrong, garbled, or incomplete.	The machine cable is loose or defective.	Disconnect the machine cable and reconnect. Try a print job that you have already printed successfully. If possible, attach the cable and the machine to another computer that you know works and try a print job. Finally, try a new machine cable.

Printing problems

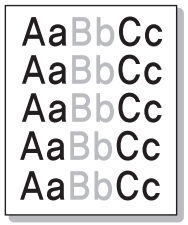
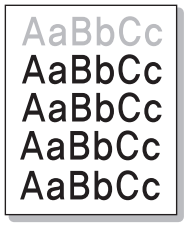
Condition	Possible cause	Suggested solutions
	The wrong printer driver was selected.	Check the application's printer selection menu to ensure that your machine is selected.
	The software application is malfunctioning.	Try printing a job from another application.
	The operating system is malfunctioning.	Exit Windows and reboot the computer. Turn the machine off and back on again.
Pages print, but they are blank.	The toner cartridge is defective or out of toner.	Redistribute the toner, if necessary. If necessary, replace the toner cartridge. • See "Redistributing toner" on page 79. • See "Replacing the toner cartridge" on page 81.
	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 machine does not print PDF files correctly. Some parts of graphics, text, or illustrations are missing.	Incompatibility between the PDF file and the Acrobat products.	Printing the PDF file as an image may enable the file to print. Turn on **Print As Image** from the Acrobat printing options. It will take longer to print when you print a PDF file as an image.
The print quality of photos is not good. Images are not clear.	The resolution of the photo is very low.	Reduce the photo size. If you increase the photo size in the software application, the resolution will be reduced.
Before printing, the machine emits vapor near the output tray.	Using damp paper can cause vapor during printing.	This is not a problem. Just keep printing.

Printing problems

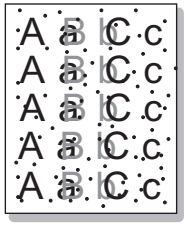
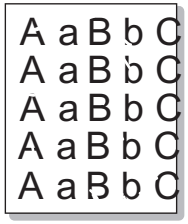
Condition	Possible cause	Suggested solutions
The machine does not print special-sized paper, such as billing paper.	Paper size and paper size setting do not match.	Set the correct paper size in the **Custom** in **Paper** tab in **Printing Preferences** (see "Opening printing preferences" on page 55).
The printed billing paper is curled.	The paper type setting does not match.	Change the printer option and try again. Go to **Printing Preferences**, click **Paper** tab, and set type to **Thick** (see "Opening printing preferences" on page 55).

Printing quality problems

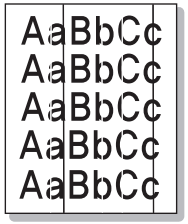
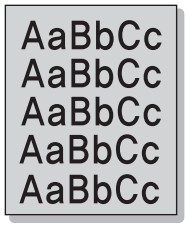
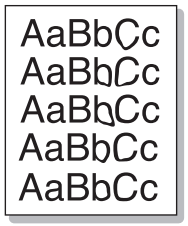
If the inside of the machine is dirty or paper has been loaded improperly, there might be a reduction in print quality. See the table below to clear the problem.

Condition	Suggested solutions
Light or faded print 	• If a vertical white streak or faded area appears on the page, the toner supply is low. Install a new toner cartridge (see "Replacing the toner cartridge" on page 81). • The paper may not meet paper specifications; for example, the paper may be too moist or rough. • If the entire page is light, the print resolution setting is too low or the toner save mode is on. Adjust the print resolution and turn the toner save mode off. See the help screen of the printer driver. • A combination of faded or smeared defects may indicate that the toner cartridge needs cleaning. Clean the inside of your machine (see "Cleaning the machine" on page 89). • The surface of the LSU part inside the machine may be dirty. Clean the inside of your machine (see "Cleaning the machine" on page 89). If these steps do not correct the problem, contact a service representative.
The top half of the paper is printed lighter than the rest of the paper 	**The toner might not adhere properly to this type of paper.** • Change the printer option and try again. Go to **Printing Preferences**, click the **Paper** tab, and set the paper type to **Recycled** (see "Opening printing preferences" on page 55).

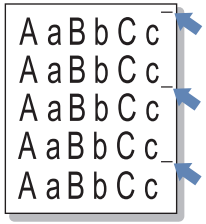
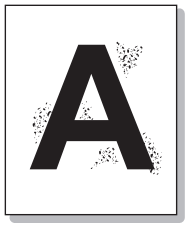
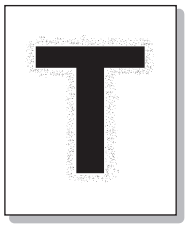
Printing quality problems

Condition	Suggested solutions
Toner specks 	• The paper may not meet specifications; for example, the paper may be too moist or rough. • The transfer roller may be dirty. Clean the inside of your machine (see "Cleaning the machine" on page 89). • The paper path may need cleaning. Contact a service representative (see "Cleaning the machine" on page 89).
Dropouts 	If faded areas, generally rounded, 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. • The paper lot is bad. The manufacturing processes can cause some areas to reject toner. Try a different kind or brand of paper. • Change the printer option and try again. Go to **Printing Preferences**, click the **Paper** tab, and set type to **Thick** (see "Opening printing preferences" on page 55). If these steps do not correct the problem, contact a service representative.
White Spots 	If white spots appear on the page: • The paper is too rough and a lot of dirt from paper falls to the inner components within the machine, so the transfer roller may be dirty. Clean the inside of your machine (see "Cleaning the machine" on page 89). • The paper path may need cleaning. Clean the inside of your machine (see "Cleaning the machine" on page 89). If these steps do not correct the problem, contact a service representative.

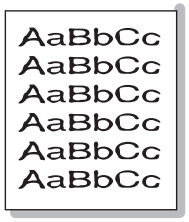
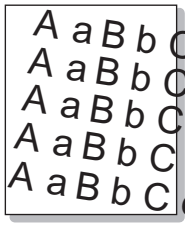
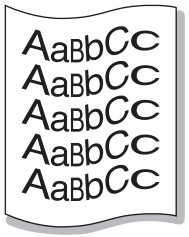
Printing quality problems

Condition	Suggested solutions
Vertical lines 	If black vertical streaks appear on the page: • The surface (drum part) of the imaging unit inside the machine has probably been scratched. Remove the imaging unit and install a new one (see "Replacing the imaging unit" on page 85). If white vertical streaks appear on the page: • The surface of the LSU part inside the machine may be dirty. Clean the inside of your machine (see "Cleaning the machine" on page 89). If these steps do not correct the problem, contact a service representative.
Black or color background 	If the amount of background shading becomes unacceptable: • Change to a lighter weight paper. • Check the environmental conditions: very dry conditions or a high level of humidity (higher than 80% RH) can increase the amount of background shading. • Remove the old imaging unit and install a new one (see "Replacing the imaging unit" on page 85). • Thoroughly redistribute the toner (see "Redistributing toner" on page 79).
Toner smear 	• Clean the inside of the machine (see "Cleaning the machine" on page 89). • Check the paper type and quality. • Remove the imaging unit and install a new one (see "Replacing the imaging unit" on page 85).

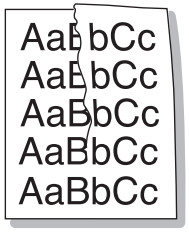
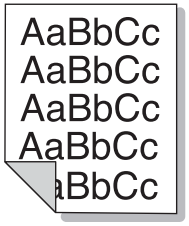
Printing quality problems

Condition	Suggested solutions
Vertical repetitive defects 	If marks repeatedly appear on the printed side of the page at even intervals: • The imaging unit may be damaged. If you still have the same problem, remove the imaging unit and, install a new one (see "Replacing the imaging unit" on page 85). • Parts of the machine 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.
Background scatter 	Background scatter results from bits of toner randomly 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. Or select **Thick** from the **Printing Preferences** window (see "Opening printing preferences" on page 55). • If background scatter covers the entire surface area of a printed page, adjust the print resolution through your software application or in **Printing Preferences** (see "Opening printing preferences" on page 55). Ensure the correct paper type is selected. For example: If Thicker Paper is selected, but Plain Paper actually used, an overcharging can occur causing this copy quality problem. • If you are using a new toner cartridge, redistribute the toner first (see "Redistributing toner" on page 79).
Toner particles are around bold characters or pictures 	The toner might not adhere properly to this type of paper. • Change the printer option and try again. Go to **Printing Preferences**, click the **Paper** tab, and set the paper type to **Recycled** (see "Opening printing preferences" on page 55). • Ensure the correct paper type is selected. For example: If Thicker Paper is selected, but Plain Paper actually used, an overcharging can occur causing this copy quality problem.

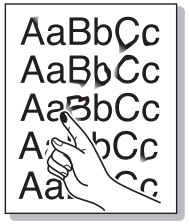
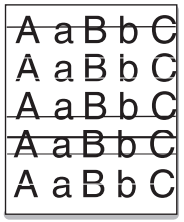
Printing quality problems

Condition	Suggested solutions
Misformed characters 	• If characters are improperly formed and producing hollow images, the paper stock may be too slick. Try different paper.
Page skew 	• Ensure that the paper is loaded properly. • Check the paper type and quality. • Ensure that 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 paper type and quality. Both high temperature and humidity can cause paper curl. • Turn the stack of paper over in the tray. Also try rotating the paper 180° in the tray.

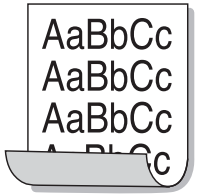
Printing quality problems

Condition	Suggested solutions
Wrinkles or creases 	• Ensure that the paper is loaded properly. • Check the paper type and quality. • Turn the stack of paper over in the tray. Also try rotating the paper 180° in the tray.
Back of printouts are dirty 	• Check for leaking toner. Clean the inside of the machine (see "Cleaning the machine" on page 89).
Solid color or black pages 	• The imaging unit may not be installed properly. Remove the imaging unit and reinsert it. • The imaging unit may be defective. Remove the imaging unit and install a new one (see "Replacing the imaging unit" on page 85). • The machine may require repairing. Contact a service representative.

Printing quality problems

Condition	Suggested solutions
Loose toner  	• Clean the inside of the machine (see "Cleaning the machine" on page 89). • Check the paper type and quality. • Remove the imaging unit and then, install a new one (see "Replacing the toner cartridge" on page 81). If the problem persists, the machine may require repair. Contact a service representative.
Character voids 	Character voids are white areas within parts of characters that should be solid black: • You may be printing on the wrong surface of the paper. Remove the paper and turn it around. • The paper may not meet paper specifications.
Horizontal stripes  	If horizontally aligned black streaks or smears appear: • The imaging unit may be installed improperly. Remove the imaging unit and reinsert it. • The imaging unit may be defective. Remove the imaging unit and install a new one (see "Replacing the imaging unit" on page 85). If the problem persists, the machine may require repairing. Contact a service representative.

Printing quality problems

Condition	Suggested solutions
Curl 	If the printed paper is curled or paper does not feed into the machine: • Turn the stack of paper over in the tray. Also try rotating the paper 180° in the tray. • Change the printer's paper option and try again. Go to **Printing Preferences**, click the **Paper** tab, and set type to **Thin** (see "Opening printing preferences" on page 55).
• An unknown image repetitively appears on a few sheets • Loose toner • Light print or contamination occurs	Your machine is probably being used at an altitude of 1,000 m (3,281 ft) or above. The high altitude may affect the print quality, such as loose toner or light imaging. Change the altitude setting for your machine (see "Altitude adjustment" on page 219).

Copying problems

Condition	Suggested solutions
Copies are too light or too dark.	Adjust the darkness in copy feature to lighten or darken the backgrounds of copies (see "Changing the settings for each copy" on page 59).
Smears, lines, marks, or spots appear on copies.	• If the defects are on the original, adjust darkness in copy feature to lighten the background of your copies. • Adjust background in copy setup removes the background color (see "Adjust Bkgd" on page 203). • If there are no defects on the original, clean the scan unit (see "Cleaning the scan unit" on page 92).
Copy image is skewed.	• Ensure that the original is aligned with the registration guide. • The transfer roller may be dirty. Clean the inside of your machine (see "Cleaning the machine" on page 89).
Blank copies print out.	Ensure that the original is face down on the scanner glass or face up in the document feeder. If these steps do not correct the problem, contact a service representative.
Image rubs off the copy easily.	• Replace the paper in the tray with paper from a new package. • In high humidity areas, do not leave paper in the machine for extended periods of time.
Frequent copy paper jams occur.	• Fan the paper, then turn it over in the tray. Replace the paper in the tray with a fresh supply. Check/adjust the paper guides, if necessary. • Ensure that the paper is the proper type and weight (see "Print media specifications" on page 117). • Check for copy paper or pieces of copy paper remaining in the machine after a paper jam has been cleared.
Toner cartridge produces fewer copies than expected before running out of toner.	• Your originals may contain pictures, solids, or heavy lines. For example, your originals may be forms, newsletters, books, or other documents that use more toner. • The scanner lid may be left open while copies are being made. • Turn the machine off and back on.

Scanning problems

Condition	Suggested solutions
The scanner does not work.	• Make sure that you place the original to be scanned face down on the scanner glass, or face up in the document feeder (see "Loading originals" on page 49). • There may not be enough available memory to hold the document you want to scan. Try the Prescan function to see if that works. Try lowering the scan resolution rate. • Check that the machine printer cable is connected properly. • Make sure that the machine printer cable is not defective. Switch the printer cable with a known good cable. If necessary, replace the printer cable. • Check that the scanner is configured correctly. Check scan setting in the Easy Document Creator or the application you want to use to make certain that the scanner job is being sent to the correct port (for example, USB001).
The unit scans very slowly.	• Check if the machine is printing received data. If so, scan the document after the received data has been printed. • Graphics are scanned more slowly than text. • Communication speed slows in scan mode because of the large amount of memory required to analyze and reproduce the scanned image. Set your computer to the ECP printer mode through BIOS setting. It will help to increase the speed. For details about how to set BIOS, refer to your computer user's guide.

Scanning problems

Condition	Suggested solutions
Message appears on your computer screen: • Device can't be set to the H/W mode you want. • Port is being used by another program. • Port is disabled. • Scanner is busy receiving or printing data. When the current job is completed, try again. • Invalid handle. • Scanning has failed.	• There may be a copying or printing job in progress. Try your job again when that job is finished. • The selected port is currently being used. Restart your computer and try again. • The machine printer cable may be improperly connected or the power may be off. • The scanner driver is not installed or the operating environment is not set up properly. • Ensure that the machine is properly connected and the power is on, then restart your computer. • The USB cable may be improperly connected or the power may be off.

Faxing problems

Condition	Suggested solutions
The machine is not working, there is no display, or the buttons are not working.	• Unplug the power cord and plug it in again. • Ensure that there is power being supplied to the electrical outlet. • Ensure that the power is turned on.
No dial tone.	• Check that the phone line is properly connected (see "Rear view" on page 22). • Check that the phone socket on the wall is working by plugging in another phone.
The numbers stored in memory do not dial correctly.	Make sure that the numbers are stored in memory correctly. To check that, print an address book list.
The original does not feed into the machine.	• Make sure that the paper is not wrinkled and you are inserting it in correctly. Check that the original is the right size, not too thick or thin. • Make sure that the document feeder is firmly closed. • The document feeder rubber pad may need to be replaced. Contact a service representative (see "Available maintenance parts" on page 76).
Faxes are not received automatically.	• The receiving mode should be set to fax (see "Changing the receive modes" on page 249). • Make sure that there is paper in the tray (see "Print media specifications" on page 117). • Check to see if the display shows any error message. If it does, clear the problem.
The machine does not send.	• Make sure that the original is loaded in the document feeder or on the scanner glass. • Check the fax machine you are sending to, to see if it can receive your fax.
The incoming fax has blank spaces or is of poor-quality.	• The fax machine sending you the fax may be faulty. • A noisy phone line can cause line errors. • Check your machine by making a copy. • A toner cartridge has almost reached its estimated cartridge life. Replace the toner cartridge (see "Replacing the toner cartridge" on page 81).

Faxing problems

Condition	Suggested solutions
Some of the words on an incoming fax are stretched.	The fax machine sending the fax had a temporary document jam.
There are lines on the originals you sent.	Check your scan unit for marks and clean it (see "Cleaning the scan unit" on page 92).
The machine dials a number, but the connection with the other fax machine fails.	The other fax machine may be turned off, out of paper, or cannot answer incoming calls. Speak with the other machine operator and ask them to solve the problem on their side.
Faxes do not store in memory.	There may not be enough memory space to store the fax. If the display indicating the memory status shows, delete any faxes you no longer need from the memory, and then try to store the fax again. Call for service.
Blank areas appear at the bottom of each page or on other pages, with a small strip of text at the top.	You may have chosen the wrong paper settings in the user option setting. Check the paper size and type again.

Operating system problems

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.
"General Protection Fault", "Exception OE", "Spool 32", or "Illegal Operation" messages appear.	Close all other applications, reboot Windows and try printing again.
"Fail To Print", "A printer timeout error occurred" message appear.	These messages may appear during printing. Just keep waiting until the machine finishes printing. If the message appears in ready mode or after printing has completed, check the connection and/or whether an error has occurred.

Refer to the Microsoft Windows User's Guide that came with your computer for further information on Windows error messages.

Operating system problems

Common Macintosh problems

Condition	Suggested solutions
The machine does not print PDF files correctly. Some parts of graphics, text, or illustrations are missing.	Printing the PDF file as an image may enable the file to print. Turn on **Print As Image** from the Acrobat printing options. It will take longer to print when you print a PDF file as an image.
Some letters are not displayed normally during cover page printing.	Mac OS cannot create the font while printing the cover page. The English alphabet and numbers are displayed normally on the cover page.
When printing a document in Macintosh with Acrobat Reader 6.0 or higher, colors print incorrectly.	Make sure that the resolution setting in your machine driver matches the one in Acrobat Reader.

Refer to the Macintosh User's Guide that came with your computer for further information on Macintosh error messages.

Operating system problems

Common Linux problems

Condition	Suggested solutions
The machine does not print.	• Check if the printer driver is installed in your system. Open Unified Driver Configurator and switch to the **Printers** tab in the **Printers configuration** window to look at the list of available machines. Make sure that your machine is displayed on the list. If not, open **Add new printer wizard** to set up your device. • Check if the machine is started. Open **Printers configuration** and select your machine from the printers list. Look at the description in the **Selected printer** pane. If its status contains **Stopped**, press the **Start** button. Normal operation of the machine should be restored. The "stopped" status might be activated when some problems in printing occur. • Check if your application has special print options 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 the command line parameter in the command item.
Some color images come out all black.	This is a known bug in Ghostscript (until GNU Ghostscript version 7.05) when the base color space of the document is indexed color space and it is converted through CIE color space. Because Postscript uses CIE color space for Color Matching System, you should upgrade Ghostscript on your system to at least GNU Ghostscript version 7.06 or later. You can find recent Ghostscript versions at www.ghostscript.com.
Some color images come out in unexpected color.	This is a known bug in Ghostscript (until GNU Ghostscript version 7.xx) when the base color space of the document is indexed RGB color space and it is converted through CIE color space. Because Postscript uses CIE color space for Color Matching System, you should upgrade Ghostscript on your system to at least GNU Ghostscript version 8.xx or later. You can find recent Ghostscript versions at www.ghostscript.com.
The machine does not print whole pages, and output is printed on half the page.	It is a known problem that occurs when a color machine is used on version 8.51 or earlier of Ghostscript, 64-bit Linux OS, and has been reported to bugs.ghostscript.com as Ghostscript Bug 688252.The problem is solved in AFPL Ghostscript v. 8.52 or above. Download the latest version of AFPL Ghostscript from http://sourceforge.net/projects/ghostscript/ and install it to solve this problem.

Operating system problems

Condition	Suggested solutions
I cannot 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 detailed information, refer to the Help for Linux distribution CD or Gimp Front-end application. If you wish to use another kind of scan application, refer to application's Help.
"Cannot open port device file" error message appears when printing a document.	Avoid changing print job parameters (e.q., via LPR GUI) 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 the port while printing, the abrupt termination of the driver keeps the port locked and unavailable for subsequent print jobs. If this situation occurs, try to release the port by selecting **Release port** in the **Port configuration** window.
The machine does not appear on the scanners list.	• Ensure your machine is attached to your computer, connected properly via the USB port, and is turned on. • Ensure the scanner driver for your machine is installed in your system. Open Unified Linux 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. • Ensure the port is not busy. Since functional components of machine (printer and scanner) share the same I/O interface (port), the situation of simultaneous access of different user applications to the same port is possible. To avoid possible conflicts, only one of them at a time is allowed to gain control over the device. The other user will encounter "device busy" response. This usually happens when starting a scan procedure. An appropriate message box appears. To identify the source of the problem, open the Ports configuration and select the port assigned to your scanner, 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 another application. If this is the case, you should either wait for completion of the current job or press the Release port button, if you are sure that the present port application is not functioning properly.
The machine does not scan.	• Ensure a document is loaded into the machine, ensure your machine is connected to the computer. • If there is an I/O error while scanning.

Operating system problems

Refer to the Linux User's Guide that came with your computer for further information on Linux error messages.

Common PostScript problems

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

Problem	Possible cause	Solution
The PostScript file cannot be printed	The PostScript driver may not be installed correctly.	• Install the PostScript driver (see "Software Installation" on page 141). • Print a configuration page and verify that the PS version is available for printing. • If the problem persists, contact a service representative.
Limit Check Error report prints	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	The 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 machine.
The optional tray is not selected in the driver	The printer driver has not been configured to recognize the optional tray.	Open the driver properties, select the **Device Options** tab, and set the tray option.
When printing 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 the one in Acrobat Reader.	Make sure that the resolution setting in your printer driver matches the one in Acrobat Reader.

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Glossary

The following glossary helps you get familiar with the product by understanding the terminologies commonly used with printing as well as mentioned in this user's guide.

802.11

802.11 is a set of standards for wireless local area network (WLAN) communication, developed by the IEEE LAN/MAN Standards Committee (IEEE 802).

802.11b/g/n

802.11b/g/n can share same hardware and use the 2.4 GHz band. 802.11b supports bandwidth up to 11 Mbps, 802.11n supports bandwidth up to 150 Mbps. 802.11b/g/n devices may occasionally suffer interference from microwave ovens, cordless telephones, and Bluetooth devices.

Access point

Access Point or Wireless Access Point (AP or WAP) is a device that connects wireless communication devices together on wireless local area networks (WLAN), and acts as a central transmitter and receiver of WLAN radio signals.

ADF

An Automatic Document Feeder (ADF) is a scanning unit that will automatically feed an original sheet of paper so that the machine can scan some amount of the paper at once.

AppleTalk

AppleTalk is a proprietary suite of protocols developed by Apple, Inc for computer networking. It was included in the original Macintosh (1984) and is now deprecated by Apple in favor of TCP/IP networking.

BIT Depth

A computer graphics term describing the number of bits used to represent the color of a single pixel in a bitmapped image. Higher color depth gives a broader range of distinct colors. As the number of bits increases, the number of possible colors becomes impractically large for a color map. 1-bit color is commonly called as monochrome or black and white.

BMP

A bitmapped graphics format used internally by the Microsoft Windows graphics subsystem (GDI), and used commonly as a simple graphics file format on that platform.

Glossary

BOOTP

Bootstrap Protocol. A network protocol used by a network client to obtain its IP address automatically. This is usually done in the bootstrap process of computers or operating systems running on them. The BOOTP servers assign the IP address from a pool of addresses to each client. BOOTP enables 'diskless workstation' computers to obtain an IP address prior to loading any advanced operating system.

CCD

Charge Coupled Device (CCD) is a hardware which enables the scan job. CCD Locking mechanism is also used to hold the CCD module to prevent any damage when you move the machine.

Collation

Collation is a process of printing a multiple-copy job in sets. When collation is selected, the device prints an entire set before printing additional copies.

Control Panel

A control panel is a flat, typically vertical, area where control or monitoring instruments are displayed. They are typically found in front of the machine.

Coverage

It is the printing term used for a toner usage measurement on printing. For example, 5% coverage means that an A4 sided paper has about 5% image or text on it. So, if the paper or original has complicated images or lots of text on it, the coverage will be higher and at the same time, a toner usage will be as much as the coverage.

CSV

Comma Separated Values (CSV). A type of file format, CSV is used to exchange data between disparate applications. The file format, as it is used in Microsoft Excel, has become a de facto standard throughout the industry, even among non-Microsoft platforms.

DADF

A Duplex Automatic Document Feeder (DADF) is a scanning unit that will automatically feed and turn over an original sheet of paper so that the machine can scan on both sides of the paper.

Default

The value or setting that is in effect when taking a printer out of its box state, reset, or initialized.

Glossary

DHCP

A Dynamic Host Configuration Protocol (DHCP) is a client-server networking protocol. A DHCP server provides configuration parameters specific to the DHCP client host requesting, generally, information required by the client host to participate on an IP network. DHCP also provides a mechanism for allocation of IP addresses to client hosts.

DIMM

Dual Inline Memory Module (DIMM), a small circuit board that holds memory. DIMM stores all the data within the machine like printing data, received fax data.

DLNA

The Digital Living Network Alliance (DLNA) is a standard that allows devices on a home network to share information with each other across the network.

DNS

The Domain Name Server (DNS) is a system that stores information associated with domain names in a distributed database on networks, such as the Internet.

Dot Matrix Printer

A dot matrix printer refers to a type of computer printer with a print head that runs back and forth on the page and prints by impact, striking an ink-soaked cloth ribbon against the paper, much like a typewriter.

DPI

Dots Per Inch (DPI) is a measurement of resolution that is used for scanning and printing. Generally, higher DPI results in a higher resolution, more visible detail in the image, and a larger file size.

DRPD

Distinctive Ring Pattern Detection. Distinctive Ring is a telephone company service which enables a user to use a single telephone line to answer several different telephone numbers.

Duplex

A mechanism that will automatically turn over a sheet of paper so that the machine can print (or scan) on both sides of the paper. A printer equipped with a Duplex Unit can print on both sides of paper during one print cycle.

Duty Cycle

Duty cycle is the page quantity which does not affect printer performance for a month. Generally the printer has the lifespan limitation such as pages per year. The lifespan means the average capacity of print-outs, usually within the warranty period. For example, if the duty cycle is 48,000 pages per month assuming 20 working days, a printer limits 2,400 pages a day.

Glossary

ECM

Error Correction Mode (ECM) is an optional transmission mode built into Class 1 fax machines or fax modems. It automatically detects and corrects errors in the fax transmission process that are sometimes caused by telephone line noise.

Emulation

Emulation is a technique of one machine obtaining the same results as another.

An emulator duplicates the functions of one system with a different system, so that the second system behaves like the first system. Emulation focuses on exact reproduction of external behavior, which is in contrast to simulation, which concerns an abstract model of the system being simulated, often considering its internal state.

Ethernet

Ethernet is a frame-based computer networking technology for local area networks (LANs). It defines wiring and signaling for the physical layer, and frame formats and protocols for the media access control (MAC)/data link layer of the OSI model. Ethernet is mostly standardized as IEEE 802.3. It has become the most widespread LAN technology in use during the 1990s to the present.

EtherTalk

A suite of protocols developed by Apple Computer for computer networking. It was included in the original Macintosh (1984) and is now deprecated by Apple in favor of TCP/IP networking.

FDI

Foreign Device Interface (FDI) is a card installed inside the machine to allow a third party device such as a coin operated device or a card reader. Those devices allow the pay-for-print service on your machine.

FTP

A File Transfer Protocol (FTP) is a commonly used protocol for exchanging files over any network that supports the TCP/IP protocol (such as the Internet or an intranet).

Fuser Unit

The part of a laser printer that fuses the toner onto the print media. It consists of a heat roller and a pressure roller. After toner is transferred onto the paper, the fuser unit applies heat and pressure to ensure that the toner stays on the paper permanently, which is why paper is warm when it comes out of a laser printer.

Glossary

Gateway

A connection between computer networks, or between a computer network and a telephone line. It is very popular, as it is a computer or a network that allows access to another computer or network.

Grayscale

A shades of gray that represent light and dark portions of an image when color images are converted to grayscale; colors are represented by various shades of gray.

Halftone

An image type that simulates grayscale by varying the number of dots. Highly colored areas consist of a large number of dots, while lighter areas consist of a smaller number of dots.

Mass storage device (HDD)

Mass storage device (HDD), commonly referred to as a hard drive or hard disk, is a non-volatile storage device which stores digitally-encoded data on rapidly rotating platters with magnetic surfaces.

IEEE

The Institute of Electrical and Electronics Engineers (IEEE) is an international non-profit, professional organization for the advancement of technology related to electricity.

IEEE 1284

The 1284 parallel port standard was developed by the Institute of Electrical and Electronics Engineers (IEEE). The term "1284-B" refers to a specific connector type on the end of the parallel cable that attaches to the peripheral (for example, a printer).

Intranet

A private network that uses Internet Protocols, network connectivity, and possibly the public telecommunication system to securely share part of an organization's information or operations with its employees. Sometimes the term refers only to the most visible service, the internal website.

IP address

An Internet Protocol (IP) address is a unique number that devices use in order to identify and communicate with each other on a network utilizing the Internet Protocol standard.

Glossary

IPM

The Images Per Minute (IPM) is a way of measuring the speed of a printer. An IPM rate indicates the number of single-sided sheets a printer can complete within one minute.

IPP

The Internet Printing Protocol (IPP) defines a standard protocol for printing as well as managing print jobs, media size, resolution, and so forth. IPP can be used locally or over the Internet to hundreds of printers, and also supports access control, authentication, and encryption, making it a much more capable and secure printing solution than older ones.

IPX/SPX

IPX/SPX stands for Internet Packet Exchange/Sequenced Packet Exchange. It is a networking protocol used by the Novell NetWare operating systems. IPX and SPX both provide connection services similar to TCP/IP, with the IPX protocol having similarities to IP, and SPX having similarities to TCP. IPX/SPX was primarily designed for local area networks (LANs), and is a very efficient protocol for this purpose (typically its performance exceeds that of TCP/IP on a LAN).

ISO

The International Organization for Standardization (ISO) is an international standard-setting body composed of representatives from national standards bodies. It produces world-wide industrial and commercial standards.

ITU-T

The International Telecommunication Union is an international organization established to standardize and regulate international radio and telecommunications. Its main tasks include standardization, allocation of the radio spectrum, and organizing interconnection arrangements between different countries to allow international phone calls. A -T out of ITU-T indicates telecommunication.

ITU-T No. 1 chart

Standardized test chart published by ITU-T for document facsimile transmissions.

JBIG

Joint Bi-level Image Experts Group (JBIG) is an image compression standard with no loss of accuracy or quality, which was designed for compression of binary images, particularly for faxes, but can also be used on other images.

JPEG

Joint Photographic Experts Group (JPEG) is a most commonly used standard method of lossy compression for photographic images. It is the format used for storing and transmitting photographs on the World Wide Web.

Glossary

LDAP

The Lightweight Directory Access Protocol (LDAP) is a networking protocol for querying and modifying directory services running over TCP/IP.

LED

A Light-Emitting Diode (LED) is a semiconductor device that indicates the status of a machine.

MAC address

Media Access Control (MAC) address is a unique identifier associated with a network adapter. MAC address is a unique 48-bit identifier usually written as 12 hexadecimal characters grouped in pairs (e. g., 00-00-0c-34-11-4e). This address is usually hard-coded into a Network Interface Card (NIC) by its manufacturer, and used as an aid for routers trying to locate machines on large networks.

MFP

Multi Function Peripheral (MFP) is an office machine that includes the following functionality in one physical body, so as to have a printer, a copier, a fax, a scanner and etc.

MH

Modified Huffman (MH) is a compression method for decreasing the amount of data that needs to be transmitted between the fax machines to transfer the image recommended by ITU-T T.4. MH is a codebook-based run-length encoding scheme optimized to efficiently compress white space. As most faxes consist mostly of white space, this minimizes the transmission time of most faxes.

MMR

Modified Modified READ (MMR) is a compression method recommended by ITU-T T.6.

Modem

A device that modulates a carrier signal to encode digital information, and also demodulates such a carrier signal to decode transmitted information.

MR

Modified Read (MR) is a compression method recommended by ITU-T T.4. MR encodes the first scanned line using MH. The next line is compared to the first, the differences determined, and then the differences are encoded and transmitted.

Glossary

NetWare

A network operating system developed by Novell, Inc. It initially used cooperative multitasking to run various services on a PC, and the network protocols were based on the archetypal Xerox XNS stack. Today NetWare supports TCP/IP as well as IPX/SPX.

OPC

Organic Photo Conductor (OPC) is a mechanism that makes a virtual image for print using a laser beam emitted from a laser printer, and it is usually green or rust colored and has a cylinder shape.

An imaging unit containing a drum slowly wears the drum surface by its usage in the printer, and it should be replaced appropriately since it gets worn from contact with the cartridge development brush, cleaning mechanism, and paper.

Originals

The first example of something, such as a document, photograph or text, etc, which is copied, reproduced or translated to produce others, but which is not itself copied or derived from something else.

OSI

Open Systems Interconnection (OSI) is a model developed by the International Organization for Standardization (ISO) for communications. OSI offers a standard, modular approach to network design that divides the required set of complex functions into manageable, self-contained, functional layers. The layers are, from top to bottom, Application, Presentation, Session, Transport, Network, Data Link and Physical.

PABX

A private automatic branch exchange (PABX) is an automatic telephone switching system within a private enterprise.

PCL

Printer Command Language (PCL) is a Page Description Language (PDL) developed by HP as a printer protocol and has become an industry standard. Originally developed for early inkjet printers, PCL has been released in varying levels for thermal, dot matrix printer, and laser printers.

PDF

Portable Document Format (PDF) is a proprietary file format developed by Adobe Systems for representing two dimensional documents in a device independent and resolution independent format.

Glossary

PostScript

PostScript (PS) is a page description language and programming language used primarily in the electronic and desktop publishing areas. - that is run in an interpreter to generate an image.

Printer Driver

A program used to send commands and transfer data from the computer to the printer.

Print Media

The media like paper, envelopes, labels, and transparencies which can be used in a printer, a scanner, a fax or, a copier.

PPM

Pages Per Minute (PPM) is a method of measurement for determining how fast a printer works, meaning the number of pages a printer can produce in one minute.

PRN file

An interface for a device driver, this allows software to interact with the device driver using standard input/output system calls, which simplifies many tasks.

Protocol

A convention or standard that controls or enables the connection, communication, and data transfer between two computing endpoints.

PS

See PostScript.

PSTN

The Public-Switched Telephone Network (PSTN) is the network of the world's public circuit-switched telephone networks which, on industrial premises, is usually routed through the switchboard.

RADIUS

Remote Authentication Dial In User Service (RADIUS) is a protocol for remote user authentication and accounting. RADIUS enables centralized management of authentication data such as usernames and passwords using an AAA (authentication, authorization, and accounting) concept to manage network access.

Resolution

The sharpness of an image, measured in Dots Per Inch (DPI). The higher the dpi, the greater the resolution.

Glossary

SMB

Server Message Block (SMB) is a network protocol mainly applied to share files, printers, serial ports, and miscellaneous communications between nodes on a network. It also provides an authenticated Inter-process communication mechanism.

SMTP

Simple Mail Transfer Protocol (SMTP) is the standard for e-mail transmissions across the Internet. SMTP is a relatively simple, text-based protocol, where one or more recipients of a message are specified, and then the message text is transferred. It is a client-server protocol, where the client transmits an email message to the server.

SSID

Service Set Identifier (SSID) is a name of a wireless local area network (WLAN). All wireless devices in a WLAN use the same SSID in order to communicate with each other. The SSIDs are case-sensitive and have a maximum length of 32 characters.

Subnet Mask

The subnet mask is used in conjunction with the network address to determine which part of the address is the network address and which part is the host address.

TCP/IP

The Transmission Control Protocol (TCP) and the Internet Protocol (IP); the set of communications protocols that implement the protocol stack on which the Internet and most commercial networks run.

TCR

Transmission Confirmation Report (TCR) provides details of each transmission such as job status, transmission result and number of pages sent. This report can be set to print after each job or only after failed transmissions.

TIFF

Tagged Image File Format (TIFF) is a variable-resolution bitmapped image format. TIFF describes image data that typically come from scanners. TIFF images make use of tags, keywords defining the characteristics of the image that is included in the file. This flexible and platform-independent format can be used for pictures that have been made by various image processing applications.

Toner Cartridge

A kind of bottle or container used in a machine like a printer which contains toner. Toner is a powder used in laser printers and photocopiers, which forms the text and images on the printed paper. Toner can be fused by by a combination of heat/pressure from the fuser, causing it to bind to the fibers in the paper.

Glossary

TWAIN

An industry standard for scanners and software. By using a TWAIN-compliant scanner with a TWAIN-compliant program, a scan can be initiated from within the program. It is an image capture API for Microsoft Windows and Apple Macintosh operating systems.

UNC Path

Uniform Naming Convention (UNC) is a standard way to access network shares in Window NT and other Microsoft products. The format of a UNC path is: \\<servername>\<sharename>\<Additional directory>

URL

Uniform Resource Locator (URL) is the global address of documents and resources on the Internet. The first part of the address indicates what protocol to use, the second part specifies the IP address or the domain name where the resource is located.

USB

Universal Serial Bus (USB) is a standard that was developed by the USB Implementers Forum, Inc., to connect computers and peripherals. Unlike the parallel port, USB is designed to concurrently connect a single computer USB port to multiple peripherals.

Watermark

A watermark is a recognizable image or pattern in paper that appears lighter when viewed by transmitted light. Watermarks were first introduced in Bologna, Italy in 1282; they have been used by papermakers to identify their product, and also on postage stamps, currency, and other government documents to discourage counterfeiting.

WEP

Wired Equivalent Privacy (WEP) is a security protocol specified in IEEE 802.11 to provide the same level of security as that of a wired LAN. WEP provides security by encrypting data over radio so that it is protected as it is transmitted from one end point to another.

WIA

Windows Imaging Architecture (WIA) is an imaging architecture that is originally introduced in Windows Me and Windows XP. A scan can be initiated from within these operating systems by using a WIA-compliant scanner.

WPA

Wi-Fi Protected Access (WPA) is a class of systems to secure wireless (Wi-Fi) computer networks, which was created to improve upon the security features of WEP.

Glossary

WPA-PSK

WPA-PSK (WPA Pre-Shared Key) is special mode of WPA for small business or home users. A shared key, or password, is configured in the wireless access point (WAP) and any wireless laptop or desktop devices. WPA-PSK generates a unique key for each session between a wireless client and the associated WAP for more advanced security.

WPS

The Wi-Fi Protected Setup (WPS) is a standard for establishing a wireless home network. If your wireless access point supports WPS, you can configure the wireless network connection easily without a computer.

XPS

XML Paper Specification (XPS) is a specification for a Page Description Language (PDL) and a new document format, which has benefits for portable document and electronic document, developed by Microsoft. It is an XML-based specification, based on a new print path and a vector-based device-independent document format.

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