Laser MFP

User's Guide

Read this manual carefully before you use this machine and keep it handy for future reference. For safe and correct use, please be sure to read the Safety Information in this manual before using the machine.

CONTENTS

13. Maintenance

14. Troubleshooting

15. Installing accessories

16. Specifications

Index

Safety Information

When using this machine, the following safety precautions should always be followed.

Safety During Operation

In this manual, the following important symbols are used:

> ⚠ **WARNING:**
> **Indicates a potentially hazardous situation which, if instructions are not followed, could result in death or serious injury.**

> ⚠ **CAUTION:**
> Indicates a potentially hazardous situation which, if instructions are not followed, may result in minor or moderate injury or damage to property.

⚠ *WARNING:*

- *Disconnect the power plug (by pulling the plug, not the cable) if the power cable or plug becomes frayed or otherwise damaged.*
- *To avoid hazardous electric shock or laser radiation exposure, do not remove any covers or screws other than those specified in this manual.*
- *Turn off the power and disconnect the power plug (by pulling the plug, not the cable) if any of the following occurs:*
  - *•You spill something into the machine.*
  - *•You suspect that your machine needs service or repair.*
  - *•The external housing of your machine has been damaged.*
- *Do not incinerate used toner or toner containers. Toner dust might ignite when exposed to an open flame.*
- *Disposal can take place at our authorized dealer.*
- *Dispose of used toner containers in accordance with local regulations.*
- *Keep the machine away from flammable liquids, gases, and aerosols. A fire or an electric shock might occur.*
- *Connect the machine only to the power source described on the inside front cover of this manual. Connect the power cord directly into a wall outlet and do not use an extension cord.*
- *Do not damage, break or make any modifications to the power cord. Do not place heavy objects on it. Do not pull it hard nor bend it more than necessary. These actions could cause an electric shock or fire.*
- *If the power cord is damaged (exposure of the core, disconnection, etc.), contact your service representative to change a new one. Operating the machine with a damaged power cord may cause an electric shock or fire.*

⚠ *CAUTION:*

- *Protect the machine from dampness or wet weather, such as rain and snow.*
- *Unplug the power cord from the wall outlet before you move the machine. While moving the machine, you should take care that the power cord will not be damaged under the machine.*
- *Before moving the machine, be sure to disconnect all external connections, especially the power cord from the wall outlet. Damaged power cords are a fire and electric shock hazard.*
- *When you disconnect the power plug from the wall outlet, always pull the plug (not the cable).*
- *To disconnect the power cord, pull it out by plug. Do not drag the cord itself. Doing so may result in damage to the cord, leading to fire or electric shock.*
- *For safety reason, unplug the power cord from the wall outlet if the machine will not be used for an extended period of time such as holidays.*
- *Do not allow paper clips, staples, or other small metallic objects to fall inside the machine.*
- *Keep toner (used or unused) and toner containers out of reach of children.*
- *For environmental reasons, do not dispose of the machine or expended supply waste at household waste collection points. Disposal can take place at an authorized dealer.*
- *The inside of the machine could be very hot. Do not touch the parts with a label indicating the "hot surface". Otherwise, an injury might occur.*
- *The fusing section of this machine might be very hot. Caution should be taken when removing misfed paper.*
- *Keep the machine away from humidity and dust. Otherwise a fire or an electric shock might occur.*
- *Do not place the machine on an unstable or tilted surface. If it topples over, an injury might occur.*
- *Do not use aluminum foil, carbon paper, or similar conductive paper to avoid a fire or machine failure.*
- *Make sure the room where you are using the machine is well ventilated and spacious. Good ventilation is especially important when the machine is used heavily.*
- *Do not open toner containers forcefully. Toner can spill, dirtying your clothes or hands, and possibly resulting in accidental ingestion.*
- *If toner or used toner is inhaled, gargle with plenty of water and move into a fresh air environment. Consult a doctor if necessary.*
- *If toner or used toner gets into your eyes, flush immediately with large amounts of water. Consult a doctor if necessary.*
- *If toner or used toner is swallowed, dilute by drinking a large amount of water. Consult a doctor if necessary.*

⚠ *CAUTION:*

- *Avoid getting toner on your clothes or skin when removing a paper jam or replacing toner. If your skin comes into contact with toner, wash the affected area thoroughly with soap and water.*

- *If toner gets on your clothing, wash with cold water. Hot water will set the toner into the fabric and may make removing the stain impossible.*

- *Do not look into the lamp - it can damage your eyes.*

- *When loading paper, take care not to trap or injure your fingers.*

- *During operation, rollers for transporting the paper and originals revolve. A safety device is being installed so that the machine can be operated safely. But take care not to touch the rollers during operation. An injury might occur.*

- *Fire and breakdown can result from heavy accumulation of dust inside this machine. Consult your service representative for details about and charges for cleaning the machine's interior.*

- *If you have to move the machine when the optional paper tray unit is attached, do not push on the main unit's top section. Doing so can cause the optional paper tray unit to detach, possibly resulting in injury.*

Power Supply

The socket-outlet shall be in stalled near the product and shall be easily accessible.

Ozone Safety

This product generates ozone during operation.

Normally, the ozone level is safe for operators. If ozone odor may appear, ventilate the room.

For Fax or Telephone

When using your telephone equipment, basic safety precautions should always be followed to reduce the risk of fire, electric shock and injury to persons, including the following:

Do not use this product near water, for example, near a bathtub, wash bowl, kitchen sink or laundry tub, in a wet basement or near a swimming pool. Avoid using a telephone during an electrical storm. There may be a remote risk of electric shock from lightning. Do not use a telephone in the vicinity of a gas leak to report the leak. Use only No. 26 AWG or larger telecommunication line cord.

SAVE THESE INSTRUCTIONS

Laser Safety:

This equipment is considered a class 1 laser device. This equipment contains a 15 milliwatt, 775-800 nanometer wavelength, AlGaAs laser diode. The following marking is attached on the back of the equipment.

CLASS 1 LASER PRODUCT
LASER KLASSE 1 PRODUKT

Caution:

Use of controls or adjustment or performance of procedures other than those specified in this manual might result in hazardous radiation exposure.

For North America

CDRH Regulations

This equipment complies with requirements of 21 CFR subchapter J for class 1 laser products. This equipment contains a 15 milliwatt, 775-800 nanometer wavelength, AlGaAs laser diode. This equipment does not emit hazardous radiation, since the beam is totally enclosed during all customer modes of operation and maintenance.

Caution:

Use of controls or adjustment or performance of procedures other than those specified in this manual might result in hazardous radiation exposure.

Notes for Users

LAMP(S) INSIDE THIS PRODUCT CONTAIN MERCURY AND MUST BE RECYCLED OR DISPOSED OF ACCORDING TO LOCAL, STATE OR FEDERAL LAWS.

CE

Declaration of Conformity

Notice to Users in EEA Countries

This product complies with the essential requirements and provisions of Directive 1999/5/EC of the European Parliament and of the Council of 9 March 1999 on radio equipment and telecommunications terminal equipment and the mutual recognition of their conformity.

Notice to Users Accessing Analog PSTN in EEA Countries

This product is designed to be able to access analog PSTN in all EEA countries. Local PSTN compatibility is dependent on software switch settings. Please contact your service representative if relocating this product to another country. In the event of problems, please contact your service representative in the first instance.

Aficio SP 3200SF/SP 3200SF :

> The CE declaration of Comformity is available on the Internet at URL :
> http://www.ricoh.co.jp/fax/ce_doc

CE Marking Traceability Information (For EU Countries Only)

Manufacturer:

Ricoh Co., Ltd.
3-6 Nakamagome 1-chome, Ohta-ku, Tokyo, 143-8555 Japan

Authorized representative:

RICOH EUROPE B.V.

Prof. W.H. Keesomlaan 1, 1183 DJ Amstelveen The Netherlands

User Information on Electrical & Electronic Equipment

Users in the EU, Switzerland and Norway
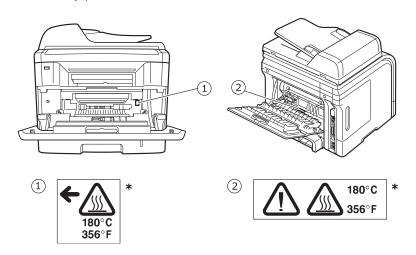
Our Products contain high quality components and are designed to facilitate recycling.

Our products or product packaging are marked with the symbol below.

The symbol indicates that the product must not be treated as municipal waste. It must be disposed of separately via the appropriate return and collection systems available. By following these instructions you ensure that this product is treated correctly and help to reduce potential impacts on the environment and human health, which could otherwise result from inappropriate handling. Recycling of products helps to conserve natural resources and protect the environment. For more detailed information on collection and recycling systems for this product, please contact the shop where you purchased it, your local dealer or sales/service representatives.

Positions of Labels and Hallmarks for ⚠ WARNING and ⚠ CAUTION Labels

This machine has labels for ⚠WARNING and ⚠CAUTION at the positions shown below. For safety, please follow the instructions and handle the machine as indicated.

*This label is stuck to hot surfaces. Be careful not to touch these areas.

In accordance with IEC 60417, this machine uses the following symbols for the main power switch:

❙ means POWER ON.

○ means POWER OFF.

ENERGY STAR® Program

The ENERGY STAR® Program encourages energy conservation by promoting energy efficient computers and other office equipment.

The program backs the development and dissemination of products that feature energy saving functions.

It is an open program in which manufacturers participate voluntarily.

Targeted products are computers, monitors, printers, facsimiles, copiers, scanners, and multifunction devices. Energy Star standards and logos are internationally uniform.

iii

NOTICE

CANADA

This product meets the applicable Industry Canada technical specifications.

The Ringer Equivalence Number is an indication of the maximum number of devices allowed to be connected to a telephone interface. The termination on an interface may consist of any combination of devices subject only to the requirement that the sum of the RENs of all the devices does not exceed five.

1 Introduction

Thank you for purchasing this multifunctional product. Your machine provides printing, copying, scanning, and faxing functions.

This chapter includes:

- **Special features**
- **Printer overview**
- **Understanding the Status LED**
- **Finding more information**
- **Selecting a location**

Special features

Your new machine is equipped with special features that improve print quality. You can:

Print with excellent quality and speed

- You can print with a resolution of up to **1200 dpi [Best]**. See the **Software section**.
- Your machine prints A4-sized paper at up to 28 ppm[a] and letter-sized paper at up to 30 ppm.
- For duplex printing, your machine prints A4-sized paper at up to 19 ipm[b] and letter-sized paper at up to 21 ipm.

Handle paper flexibly

- The **multi-purpose tray** supports letterhead, envelopes, labels, transparencies, custom-sized media, postcards, and heavy paper. The **multi-purpose tray** holds up to 50 sheets of plain paper.
- The **250-sheet tray 1** and **250-sheet optional tray 2** support plain paper in various sizes.

Create professional documents

- Print **Watermarks**. You can customize your documents with words, such as "Confidential". See the **Software section**.
- Print **Posters**. The text and pictures of each page of your document are magnified and printed across the sheet of paper and can then be taped together to form a poster. See the **Software section**.

Save time and money

- You can print multiple pages on one single sheet of paper to save paper.
- You can use preprinted forms and letterhead with plain paper. See the **Software section**.
- This machine automatically **conserves electricity** by substantially reducing power consumption when not in use.

Expand your machine's capacity

- Your machine has 96 MB of memory which can be expanded to 320 MB.
- You can add a 250-sheet **optional tray 2** to your machine. This tray lets you add paper to the machine less often.
- Zoran IPS Emulation* compatible with PostScript 3 (PS) enables PS printing.

* Zoran IPS Emulation compatible with PostScript 3

- © Copyright 1995-2005, Zoran Corporation. All rights reserved. Zoran, the Zoran logo, IPS/PS3, and OneImage are trademarks of Zoran Corporation.

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

Print in various environments

- You can print with **Windows 98**/**Me**/**NT 4.0**/**2000**/**XP**/**2003**.
- Your machine is compatible with a variety of **Macintosh** systems.
- Your machine comes with both **USB** and **Parallel** interfaces.

Use USB flash memory devices

If you have a USB memory device, you can use it in various ways with your machine.

- You can scan documents and save them to the device.
- You can directly print data stored to the device.
- You can back up data and restore backup files to the machine's memory.

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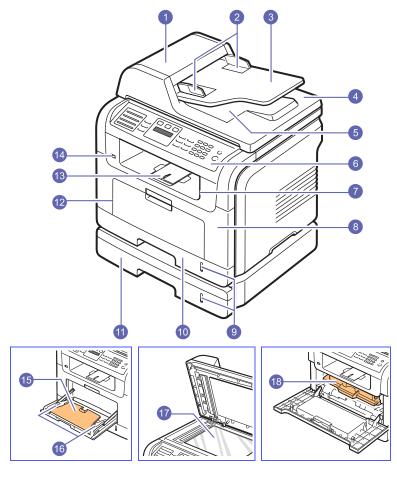
a. pages per minute
b. images per minute

Printer overview

These are the main components of your machine:

Front view
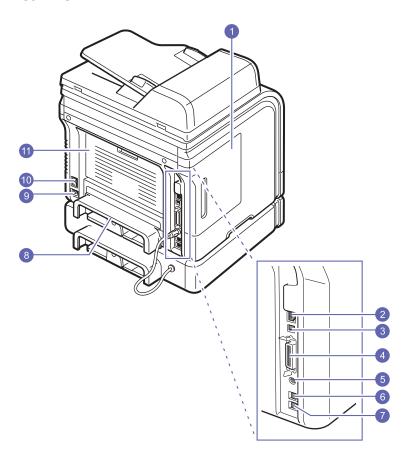
Rear view

1	ADF (automatic document feeder)[1]	10	tray 1
2	document width guides	11	optional tray 2
3	document input tray	12	multi-purpose tray
4	scanner lid	13	output support
5	document output tray	14	USB memory port
6	control panel	15	multi-purpose tray extension
7	output tray	16	multi-purpose tray paper width guides
8	front cover	17	scanner glass
9	paper level indicator	18	toner cartridge
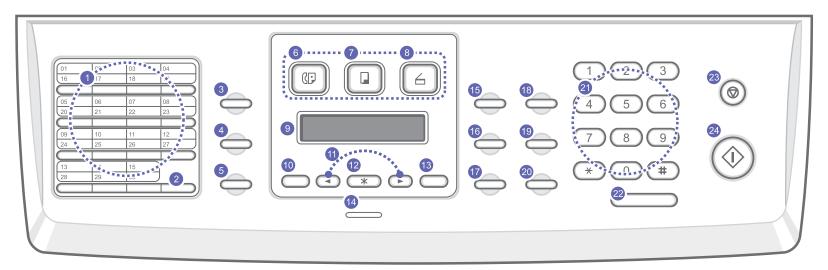
1. Automatic document feeder is used as **ADF** in this user's guide.

1	control board cover	7	extension telephone socket (EXT)
2	network port	8	duplex unit
3	USB port	9	power receptacle
4	parallel port	10	power switch
5	optional tray 2 cable connector	11	rear cover
6	telephone line socket (LINE)		

Control panel overview

#	Description	#	Description
1	**Speed buttons**: Allows you to store frequently-dialed fax numbers and email addresses and enter them with the touch of a few buttons.	**13**	**Back**: Sends you back to the upper menu level.
2	**Shift**: Allows you to shift the speed buttons to access numbers 16 through 30.	**14**	**Status**: Shows the status of your machine. See page 1.4.
3	**Address Book**: Allows you to store frequently used fax numbers in memory or search for stored fax numbers or email addresses. Also allows you to print an **Address Book**/**Phone Book** list.	**15**	**Darkness**: Adjusts the document brightness for the current copy job.
4	**Resolution**: Adjusts the document resolution for the current fax job.	**16**	**Original Type**: Selects the document type for the current copy job.
5	**Redial**/**Pause**: In Standby mode, redials the last number, or in Edit mode, inserts a pause into a fax number.	**17**	**Reduce**/**Enlarge**: Makes a copy smaller or larger than the original.
6	**Fax**: Activates Fax mode.	**18**	**USB Print**: Allows you to directly print files stored on a USB Memory device when it is inserted into the **USB memory port** on the front of your machine.
7	**Copy**: Activates Copy mode.	**19**	**Duplex**: Allows you to print documents on both sides of the paper.
8	**Scan**/**Email**: Activates Scan mode.	**20**	**Toner Save**: Allows you to save on toner by using less toner in printing.
9	**Display**: Shows the current status and prompts during an operation.	**21**	**Number keypad**: dials a number or enters alphanumeric characters.
10	**Menu**: Enters Menu mode and scrolls through the available menus.	**22**	**On Hook Dial**: Engages the telephone line.
11	**Scroll** buttons: Scroll through the options available in the selected menu, and increase or decrease values.	**23**	**Stop**/**Clear**: Stops an operation at any time. In Standby mode, clears/cancels the copy options, such as the darkness, the document type setting, the copy size, and the number of copies.
12	**OK**: Confirms the selection on the screen.	**24**	**Start**: Starts a job.

Understanding the Status LED

The **Status** LED on the control panel shows the status of your machine. See the table below to know your machine's status.

Status		Description
Off		• The machine is off-line. • The machine is in Power Save mode. When data is received, or any button is pressed, it switches to on-line automatically.
Green	On	The machine is on-line and can be used.
	Blinking	• When the backlight slowly blinks, the machine is receiving data from the computer. • When the backlight fast blinks, the machine is printing data.
Red	On	• The toner cartridge is totally exhausted. Remove the old toner cartridge and install a new one. See page 13.5. • A paper jam has occurred. To solve the problem, see page 14.2. • The front cover is open. Close the front cover. • There is no paper in the tray. Load paper in the tray. • The toner cartridge installed is not a genuine cartridge, and you selected **Stop** at the **NonGenuine Toner** prompt. See page 14.10. • The lifespan of the toner cartridge is reached, and you selected **Stop** at the **Toner Exhausted** prompt. See page 14.10. • The machine has stopped due to a major error. Check the display message. See page 14.7 for details on the meaning of the error message.
	Blinking	• A minor error occurs and the machine is waiting an error to be cleared. Check the display message. When the problem is cleared, the machine resumes. • The toner cartridge installed is not a genuine cartridge, and you selected **Continue** at the **NonGenuine Toner** prompt. See page 14.10. • The lifespan of the toner cartridge is reached, and you selected **Continue** at the **Toner Exhausted** prompt. See page 14.10. • The toner cartridge is low. Order a new toner cartridge. You can temporarily improve print quality by redistributing the toner. See page 13.4.

Finding more information

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

Quick Install Guide 	Provides information on setting up your machine and, therefore, be sure to follow the instructions in the guide to get the machine ready.
Online User's Guide 	Provides you with step-by-step instructions for using your machine's full features, and contains information for maintaining your machine, troubleshooting, and installing accessories. This user's guide also contains the **Software section** providing you with information on how to print documents with your machine on various operating systems, and how to use the supplied software utilities. **Note** You can access the user's guides in other languages from the **Manual** folder on the **Printer, Scanner Drivers and Utilities Type 104 software CD**.
Network Printer User's Guide 	Contained on the **Printer, Scanner Drivers and Utilities Type 104 software CD**, provides you with information on setting up and connecting your machine to a network.
Printer Driver Help 	Provides you with help information on printer driver properties and instructions for setting up the properties for printing. To access a printer driver help screen, click **Help** from the printer properties dialog box.
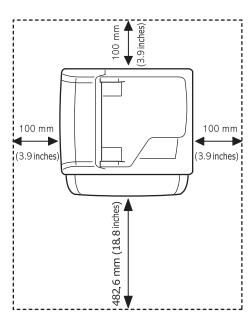
Selecting a location

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

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

Clearance space

- **Front**: 482,6 mm (enough space so that the paper tray can be removed)
- **Back**: 100 mm (enough space for ventilation)
- **Right**: 100 mm (enough space for ventilation)
- **Left**: 100 mm (enough space for ventilation)

2 System setup
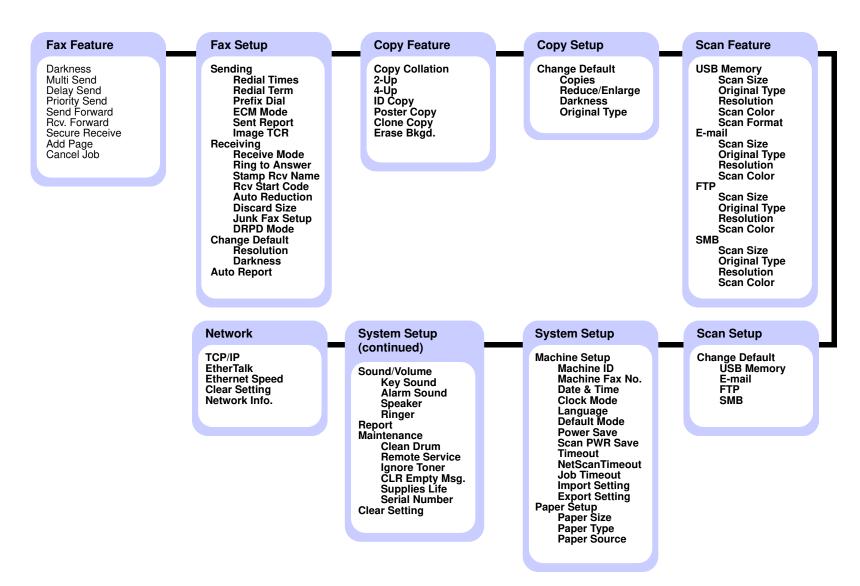
This chapter gives you an overview of menus available on your machine and step-by-step instructions for setting up the machine's systems.

This chapter includes:

- **Menu overview**
- **Changing the display language**
- **Setting the date and time**
- **Changing the default mode**
- **Setting sounds**
- **Entering characters using the number keypad**
- **Using the save modes**
- **Setting print job timeout**

Menu overview

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**. Refer to the following diagram. Menus available in Fax, Copy, or Scan mode vary.

Fax Feature

Darkness
Multi Send
Delay Send
Priority Send
Send Forward
Rcv. Forward
Secure Receive
Add Page
Cancel Job

Fax Setup

Sending
    Redial Times
    Redial Term
    Prefix Dial
    ECM Mode
    Sent Report
    Image TCR
Receiving
    Receive Mode
    Ring to Answer
    Stamp Rcv Name
    Rcv Start Code
    Auto Reduction
    Discard Size
    Junk Fax Setup
    DRPD Mode
Change Default
    Resolution
    Darkness
Auto Report

Copy Feature

Copy Collation
2-Up
4-Up
ID Copy
Poster Copy
Clone Copy
Erase Bkgd.

Copy Setup

Change Default
    Copies
    Reduce/Enlarge
    Darkness
    Original Type

Scan Feature

USB Memory
    Scan Size
    Original Type
    Resolution
    Scan Color
    Scan Format
E-mail
    Scan Size
    Original Type
    Resolution
    Scan Color
FTP
    Scan Size
    Original Type
    Resolution
    Scan Color
SMB
    Scan Size
    Original Type
    Resolution
    Scan Color

Network

TCP/IP
EtherTalk
Ethernet Speed
Clear Setting
Network Info.

System Setup (continued)

Sound/Volume
    Key Sound
    Alarm Sound
    Speaker
    Ringer
Report
Maintenance
    Clean Drum
    Remote Service
    Ignore Toner
    CLR Empty Msg.
    Supplies Life
    Serial Number
Clear Setting

System Setup

Machine Setup
    Machine ID
    Machine Fax No.
    Date & Time
    Clock Mode
    Language
    Default Mode
    Power Save
    Scan PWR Save
    Timeout
    NetScanTimeout
    Job Timeout
    Import Setting
    Export Setting
Paper Setup
    Paper Size
    Paper Type
    Paper Source

Scan Setup

Change Default
    USB Memory
    E-mail
    FTP
    SMB

Changing the display language

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

1. Press **Menu** until **System Setup** appears on the bottom line of the display and press **OK**.

2. Press **OK** when **Machine Setup** appears.

3. Press the **Scroll** buttons until **Language** appears and press **OK**.

4. Press the **Scroll** buttons until the language you want appears and press **OK**.

5. Press **Stop/Clear** to return to Standby mode.

Setting the date and time

The current date and time are shown on the display when your machine is on and ready to work. All of your faxes will have the date and time printed on them.

> **Note**
> If power to the machine is cut off, you need to reset the correct time and date once the power has been restored.

1. Press **Menu** until **System Setup** appears on the bottom line of the display and press **OK**.

2. Press **OK** when **Machine Setup** appears.

3. Press the **Scroll** buttons until **Date & Time** appears and press **OK**.

4. Enter the correct time and date using the number keypad.

   Month = 01 to 12
   Day = 01 to 31
   Year = requires four digits
   Hour = 01 to 12 (12-hour mode)
          00 to 23 (24-hour mode)
   Minute = 00 to 59

> **Note**
> The date format may differ from country to country.

   You can also use the **Scroll** buttons to move the cursor under the digit you want to correct and enter a new number.

5. To select **AM** or **PM** for 12-hour format, press the ✳ or # button or any number button.

   When the cursor is not under the AM or PM indicator, pressing the ✳ or # button immediately moves the cursor to the indicator.

   You can change the clock mode to 24-hour format (e.g. 01:00 PM as 13:00). For details, see the next section.

6. Press **OK** to save the time and date.

   When you enter a wrong number, **Out of Range** appears and the machine does not proceed to the next step. If this happens, simply reenter the correct number.

7. Press **Stop/Clear** to return to Standby mode.

Changing the clock mode

You can set your machine to display the current time using either a 12-hour or 24-hour format.

1. Press **Menu** until **System Setup** appears on the bottom line of the display and press **OK**.

2. Press **OK** when **Machine Setup** appears.

3. Press the **Scroll** buttons until **Clock Mode** appears and press **OK**.

4. Press the **Scroll** buttons to select the other mode and press **OK**.

5. Press **Stop/Clear** to return to Standby mode.

Changing the default mode

Your machine is preset to Fax mode. You can switch this default mode between Fax mode and Copy mode.

1. Press **Menu** until **System Setup** appears on the bottom line of the display and press **OK**.

2. Press **OK** when **Machine Setup** appears.

3. Press the **Scroll** buttons until **Default Mode** appears and press **OK**.

4. Press the **Scroll** buttons until the default mode you want appears and press **OK**.

5. Press **Stop/Clear** to return to Standby mode.

Setting sounds

You can control the following sounds:

- **Key Sound**: Turns the key sound on or off. With this option set to **On**, a tone sounds each time a key is pressed.
- **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 "Common," the speaker is on until the remote machine answers.

  You can adjust the volume level using **On Hook Dial**.
- **Ringer**: Adjusts the ringer volume. For the ringer volume, you can select **Off**, **Low**, **Mid**, and **High**.

Speaker, ringer, key sound, and alarm sound

1. Press **Menu** until **System Setup** appears on the bottom line of the display and press **OK**.

2. Press the **Scroll** buttons until **Sound/Volume** appears and press **OK**.

3. Press the **Scroll** buttons until the sound option you want appears and press **OK**.

4. Press the **Scroll** buttons until the desired status or volume for the sound you have selected appears and press **OK**.

5. If necessary, repeat steps 3 through 5 to set other sounds.

6. Press **Stop/Clear** to return to Standby mode.

Speaker volume

1. Press **On Hook Dial**. A dial tone sounds from the speaker.

2. Press the **Scroll** buttons until you hear the volume you want.

3. Press **On Hook Dial** to save the change and return to Standby mode.

> **Note**
>
> You can adjust the speaker volume only when the telephone line is connected.

Entering characters using the number keypad

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

1. When you are prompted to enter a letter, locate the button labeled with the character you want. 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**, and finally **6**.

   You can enter special characters, such as space, plus sign, and etc. For details, see the below section.

2. To enter additional letters, repeat step 1.

   If the next letter is printed on the same button, move the cursor by pressing the right **Scroll** button and then press the button labeled with the letter you want. The cursor will move to the right and the next letter will appear on the display.

   You can enter a space by pressing **1** twice.

3. When you have finished entering letters, press **OK**.

Keypad letters and numbers

Key	Assigned numbers, letters, or characters
1	1 Space
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

Correcting numbers or names

If you make a mistake while entering a number or name, press the left **Scroll** button to delete the last digit or character. Then enter the correct number or character.

Inserting a pause

With some telephone systems, you must dial an access code (9, for example) and listen for a second dial tone. In such cases, you must insert a pause in the telephone number. You can insert a pause while you are setting up speed buttons or speed dial numbers.

To insert a pause, press **Redial/Pause** at the appropriate place while entering the telephone number. A - appears on the display at the corresponding location.

Using the save modes

Toner Save mode

Toner Save mode allows your machine to use less toner on each page. Activating this mode extends the life of the toner cartridge beyond what one would experience in the normal mode, but it reduces print quality.

To turn this mode on or off, press **Toner Save**.

Note
When PC-printing, you can also turn on or off Toner Save mode in the printer properties. See the **Software section**.

Power Save mode

Power Save mode allows your machine to reduce power consumption when it is not in actual use. You can turn this mode on and select a length of time for which the machine waits after a job is printed before it switches to a reduced power state.

1   Press **Menu** until **System Setup** appears on the bottom line of the display and press **OK**.

2   Press **OK** when **Machine Setup** appears.

3   Press the **Scroll** buttons until **Power Save** appears and press **OK**.

4   Press the **Scroll** buttons until **On** appears and press **OK**.

5   Press the **Scroll** buttons until the time setting you want appears and press **OK**.

6   Press **Stop/Clear** to return to Standby mode.

Scan Power Save mode

Scan Power Save mode allows you to save power by turning off the scan lamp. The scan lamp under the scanner glass automatically turns off when it is not in actual use to reduce power consumption and extend the life of the lamp. The lamp automatically wakes up after some warm-up time when you start scanning.

You can set the length of time for which the scan lamp waits after a scan job is completed before it switches to the power save mode.

1   Press **Menu** until **System Setup** appears on the bottom line of the display and press **OK**.

2   Press **OK** when **Machine Setup** appears.

3   Press the **Scroll** buttons until **Scan PWR Save** appears and press **OK**.

4   Press the **Scroll** buttons until the time setting you want appears and press **OK**.

5   Press **Stop/Clear** to return to Standby mode.

Setting print job timeout

You can set the amount of time a single print job is active before it must print.

The machine handles incoming data as a single job if it comes in within the specified time. When an error occurs while processing data from the computer and the data flow stops, the machine waits the specified time and then cancels printing if data flow does not resume.

1   Press **Menu** until **System Setup** appears on the bottom line of the display and press **OK**.

2   Press **OK** when **Machine Setup** appears.

3   Press the **Scroll** buttons until **Job Timeout** appears and press **OK**.

4   Press the **Scroll** buttons until the time setting you want appears and press **OK**.

5   Press **Stop/Clear** to return to Standby mode.

3 Software overview

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

This chapter includes:

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

Supplied software

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

This CD provides you with the following software:

CD	Contents	
Printer, Scanner Drivers and Utilities Type 104	Windows	• **Printer driver**: Use this driver to take full advantage of your printer's features. • **PostScript Printer Description (PPD) file**: Use the PostScript driver to print documents with complex fonts and graphics in the PS language. • **Scanner driver**: TWAIN and Windows Image Acquisition (WIA) drivers are available for scanning documents on your machine. • **Status Monitor**: This program allows you to monitor the machine's status and alerts you when an error occurs during printing. • **SmarThru**[1]: This is the accompanying Windows-based software for your multifunctional machine. • **Printer Settings Utility**: You can create and edit Phone Book entries from your computer and set up print and scan system data options. • **ScanClair**: This program allows you to scan a document on your machine and save it to a network-connected computer. • **User's Guide** in PDF • **Set IP**: Use this program to set your machine's TCP/IP addresses. • **Network Printer User's Guide** in PDF

CD	Contents	
Printer, Scanner Drivers and Utilities Type 104 (Continue)	Macintosh	• **PostScript Printer Description (PPD) file**: Use this file to run your machine from a Macintosh computer and print documents. • **Scan driver**: TWAIN driver is available for scanning documents on your machine.

1. Allows you to edit a scanned image in many ways using a powerful image editor and to send the image by email. You can also open another image editor program, like Adobe Photoshop, from SmarThru. For details, please refer to the onscreen help supplied on the SmarThru program.

Printer driver features

Your printer drivers support the following standard features:

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

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

Feature	PCL 6	PostScript	
	Windows	Windows	Macintosh
Toner save	O	O	X
Print quality option	O	O	O
Poster printing	O	X	X
Multiple pages per sheet (N-up)	O	O	O
Fit to page printing	O	O	O
Scale printing	O	O	O
Different source for first page	O	X	X
Watermark	O	X	X
Overlay[1]	O	X	X

1. The Overay feature is not supported in NT 4.0.

System requirements

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

Windows

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

Note

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

Macintosh

Item	Requirements
Operating system	Macintosh 10.3 ~ 10.4
RAM	128 MB
Free disk space	200 MB
Connection	USB interface, Network interface

4 Network setup

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

This chapter includes:

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

Introduction

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

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

Via network administration programs

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

- **Web Image Monitor Type 104**: A web server embedded to your network print server, which allows you to:
  - Configure the network parameters necessary for the machine to connect to various network environments.
  - Customize e-mail settings and set up **Address Book** for scanning to email.
  - Customize server settings and set up **Address Book** for scanning to an FTP or SMB servers.
  - Customize printer, copy, and fax settings.
- **SetIP**: A utility program allowing you to select a network interface and manually configure the addresses for use with the TCP/IP protocol.

For further details, refer to the user's guide on the **Printer, Scanner Drivers and Utilities Type 104 CD** that came with your machine.

Via the control panel

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

- Configure TCP/IP
- Configure EtherTalk

Supported operating systems

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

Item	Requirements
Network interface	• 10/100 Base-TX
Network operating system	• Windows 98/Me/NT 4.0/2000/XP/2003 • Macintosh OS 10.3 ~ 10.4
Network protocols	• TCP/IP on Windows • EtherTalk
Dynamic addressing server	• DHCP, BOOTP

- TCP/IP: Transmission Control Protocol/Internet Protocol
- DHCP: Dynamic Host Configuration Protocol
- BOOTP: Bootstrap Protocol

Configuring TCP/IP

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

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

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

Static addressing

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

1 Press **Menu** until **Network** appears on the bottom line of the display and press **OK**.

2 Press **OK** when **TCP/IP** appears.

3 Press the **Scroll** buttons until **Static** appears and press **OK**.

4 Press **OK** when **IP Address** appears.

5 Enter a byte between 0 and 255 using the number keypad and press the **Scroll** buttons to move between bytes.

Repeat this to complete the address from the 1st byte to the 4th byte.

6 When you have finished, press **OK**.

7 Repeat steps 5 and 6 to configure the other TCP/IP parameters: subnet mask and gateway address.

8 Press the **Scroll** buttons until **Static** appears and press **OK**.

9 Press the **Scroll** buttons until **Primary DNS** appears and press **OK**.

10 Enter each byte of the address and press **OK**.

11 Press the **Scroll** buttons until **Secondary DNS** appears and press **OK**.

12 Enter each byte of the address and press **OK**.

13 Press **Stop**/**Clear** to return to Standby mode.

Dynamic addressing (BOOTP/DHCP)

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

1 Press **Menu** until **Network** appears on the bottom line of the display.

2 Press **OK** when **TCP/IP** appears.

3 Press the **Scroll** buttons until **DHCP** or **BOOTP** appears and press **OK**.

4 Press **Stop**/**Clear** to return to Standby mode.

Configuring EtherTalk

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

1 Press **Menu** until **Network** appears on the bottom line of the display and press **OK**.

2 Press the **Scroll** buttons until **EtherTalk** appears and press **OK**.

3 Press the **Scroll** buttons until **On** appears and press **OK**.

4 Press **Stop**/**Clear** to return to Standby mode.

Setting Ethernet speed

You can select the communication speed for Ethernet connections.

1 Press **Menu** until **Network** appears on the bottom line of the display and press **OK**.

2 Press the **Scroll** buttons until **Ethernet Speed** appears and press **OK**.

3 Press the **Scroll** buttons until the speed you want appears and press **OK**.

4 Press **Stop**/**Clear** to return to Standby mode.

Restoring the network configuration

You can return the network configuration to its default settings.

1 Press **Menu** until **Network** appears on the bottom line of the display and press **OK**.

2 Press the **Scroll** buttons until **Clear Setting** appears and press **OK**.

3 Press **OK** when **Yes** appears to restore the network configuration.

4 Power the machine off and back on.

Printing a network configuration page

The Network Configuration page shows how the network interface card on your machine is configured.

1 Press **Menu** until **Network** appears on the bottom line of the display and press **OK**.

2 Press the **Scroll** buttons until **Network Info.** appears and press **OK**.

3 Press **OK** when **Yes** appears.

The Network Configuration page prints out.

5 Loading originals and print media

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

This chapter includes:

- **Loading originals**
- **Selecting print media**
- **Loading paper**
- **Setting the paper size and type**
- **Selecting an output location**

Loading originals

You can use the scanner glass or ADF to load an original for copying, scanning, and sending a fax.
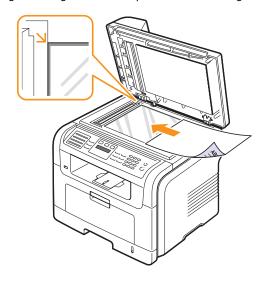
On the scanner glass

Make sure that no originals are in the ADF. If an original is detected in the ADF, the machine gives it priority over the original on the scanner glass. To get the best scan quality, especially for colored or gray-scaled images, use the scanner glass.

1 Lift and open the scanner lid.

2 Place the original **face down** on the scanner glass and align it with the registration guide at the top left corner of the glass.

3 Close the scanner lid.

> **Notes**
> - Leaving the scanner lid open while copying may affect copy quality and toner consumption.
> - Dust on the scanner glass may cause black spots on the printout. Always keep it clean.
> - If you are copying a page from a book or magazine, lift the scanner lid until its hinges are caught by the stopper and then close the lid. If the book or magazine is thicker than 30 mm, start copying with the lid open.

In the ADF

Using the ADF, you can load up to 50 sheets of paper (75 g/m^2) for one job.

When you use the ADF:
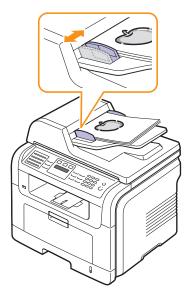
- Do not load paper smaller than 142 x 148 mm or larger than 216 x 356 mm.
- Do not attempt to load the following types of paper:
  - carbon-paper or carbon-backed paper
  - coated paper
  - onion skin or thin paper
  - wrinkled or creased paper
  - curled or rolled paper
  - torn paper
- Remove all staples and paper clips before loading.
- Make sure any glue, ink, or correction fluid on the paper is completely dry before loading.
- Do not load originals that include different sizes or weights of paper.
- Do not load booklets, pamphlets, transparencies, or documents having other unusual characteristics.

To load an original into the ADF:

1 Load the original face up into the ADF. Make sure that the bottom of the original stack matches the paper size marked on the document input tray.

2 Adjust the document width guides to the paper size.

![Note icon]

Note

Dust on the ADF glass may cause black lines on the printout. Always keep it clean.

Selecting print media

You can print on a variety of print media, such as plain paper, envelopes, labels, and transparencies. Always use print media that meet the guidelines for use with your machine. Print media that does not meet the guidelines outlined in this user's guide may cause the following problems:

• Poor print quality

• Increased paper jams

• Premature wear on the machine.

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

• The type, size and weight of the print media for your machine is described in following tables.

• Desired outcome: The print media you choose should be appropriate for your project.

• Brightness: Some print media are whiter than others and produce sharper, more vibrant images.

• Surface smoothness: The smoothness of the print media affects how crisp the printing looks on the paper.

![Notes icon]

Notes

• Some print media may meet all of the guidelines in this section and still not produce satisfactory results. This may be the result of improper handling, unacceptable temperature and humidity levels, or other variables over which we have no control.

• Before purchasing large quantities of print media, ensure that it meets the requirements specified in this user's guide.

![Caution icon]

Caution

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

Supported print media types and sizes

Type	Size	Dimensions	Weight[1]	Capacity[2]
Plain paper	Letter	216 x 279 mm (8.5 x 11 inches)	• 60 to 90 g/m² (16 to 24 lb bond) for the tray • 60 to 163 g/m² (16 to 43 lb bond) for the multi-purpose tray	• 250 sheets of 75 g/m² (20 lb bond) paper for the tray • 50 sheets for the multi-purpose tray
	Legal	216 x 356 mm (8.5 x 14 inches)		
	Folio	216 x 330.2 mm (8.5 x 13 inches)		
	Oficio	216 x 343 mm (8.5 x 13.5 inches)		
	A4	210 x 297 mm (8.27 x 11.69 inches)		
	JIS B5	182 x 257 mm (7.18 x 10.12 inches)		
	ISO B5	176 x 250 mm (6.93 x 9.84 inches)		
	Executive	184.2 x 266.7 mm (7.25 x 10.5 inches)		
	A5	148.5 x 210 mm (5.85 x 8.27 inches)		
	A6	105 x 148.5 mm (4.13 x 5.85 inches)		
Envelope	Envelope B5	176 x 250 mm (6.93 x 9.84 inches)	75 to 90 g/m² (20 lb to 24 lb bond)	5 sheets of 75 g/m² (20 lb bond) in the multi-purpose tray
	Envelope Monarch	98.4 x 190.5 mm (3.88 x 7.5 inches)		
	Envelope COM-10	105 x 241 mm (4.12 x 9.5 inches)		
	Envelope DL	110 x 220 mm (4.33 x 8.66 inches)		
	Envelope C5	162 x 229 mm (6.38 x 9.02 inches)		
	Envelope C6	114 x 162 mm (4.49 x 6.38 inches)		
Transparency	Letter, A4	Refer to the Plain paper section	138 to 146 g/m² (37 to 39 lb bond)	5 sheets of 75 g/m² (20 lb bond) in the multi-purpose tray
Labels	Letter, Legal, Folio, A4, JIS B5, ISO B5, Executive, A5, A6	Refer to the Plain paper section	120 to 150 g/m² (32 to 40 lb bond)	5 sheets of 75 g/m² (20 lb bond) in the multi-purpose tray
Card stock	Letter, Legal, Folio, A4, JIS B5, ISO B5, Executive, A5, A6	Refer to the Plain paper section	60 to 163 g/m² (16 to 43 lb bond)	5 sheets of 75 g/m² (20 lb bond) in the multi-purpose tray
Minimum size (custom)		76 x 127 mm (3 x 5 inches)	60 to 163 g/m² (16 to 43 lb bond)	5 sheets of 75 g/m² (20 lb bond) in the multi-purpose tray
Maximum size (custom)		216 x 356 mm (8.5 x 14 inches)		

1. If media weight is over 90 g/m² (24 lb bond), use the multi-purpose tray.
2. Maximum capacity may differ depending on media weight, thickness, and environmental conditions.

Media sizes supported in each mode

Mode	Size	Source
Copy mode	Letter, A4, Legal, Folio, Executive, ISO B5, JIS B5, A5, A6	• **tray 1** • **optional tray 2** • **multi-purpose tray**
Single side printing	All sizes supported by the machine	• **tray 1** • **optional tray 2** • **multi-purpose tray**
Duplex printing	Letter, A4, Legal, Folio	• **tray 1** • **optional tray 2** • **multi-purpose tray[1]**
Fax mode	Letter, A4, Legal	• **tray 1** • **optional tray 2**

1. 75 to 90 g/m^2 (20 to 24 lb bond) only

Guidelines for selecting and storing print media

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

- Always use print media that conform with the specifications listed on page 5.3.
- Attempting to print on damp, curled, wrinkled, or torn paper can cause paper jams and poor print quality.
- For the best print quality, use only high quality copier grade paper specifically recommended for use in laser printers.
- Avoid using the following media types:
  - Paper with embossed lettering, perforations, or a texture that is too smooth or too rough
  - Erasable bond paper
  - Multi-paged paper
  - Synthetic paper and thermally reactive paper
  - Carbonless paper and Tracing paper.

  Use of these types of paper could result in paper jams, chemical smells, and damage to your machine.
- Store print media in its ream wrapper until you are ready to use it. Place cartons on pallets or shelves, not on the floor. Do not place heavy objects on top of the paper, whether it is packaged or unpackaged. Keep it away from moisture or other conditions that can cause it to wrinkle or curl.
- Store unused print media at temperatures between 15 °C and 30 °C. The relative humidity should be between 10% and 70%.
- Store unused print media in a moisture-proof wrap, such as a plastic container or bag, to prevent dust and moisture from contaminating your paper.
- Load special media types one sheet at a time through the multi-purpose tray to avoid paper jams.
- To prevent print media, such as transparencies and label sheets, from sticking together, remove them as they print out.

Guidelines for special print media

Media type	Guidelines

Envelopes	• Successful printing on envelopes depends upon the quality of the envelopes. When selecting envelopes, consider the following factors:
	  - Weight: The weight of the envelope paper should not exceed 90 g/m^2 or jamming may occur.
	  - Construction: Prior to printing, envelopes should lie flat with less than 6 mm curl, and should not contain air.
	  - Condition: Envelopes should not be wrinkled, nicked, or otherwise damaged.
	  - Temperature: You should use envelopes that are compatible with the heat and pressure of the machine during operation.
	• Use only well-constructed envelopes with sharp and well creased folds.
	• Do not use stamped envelopes.
	• Do not use envelopes with clasps, snaps, windows, coated lining, self-adhesive seals, or other synthetic materials.
	• Do not use damaged or poorly made envelopes.
	• Be sure the seam at both ends of the envelope extends all the way to the corner of the envelope.
	
	Acceptable
	
	Unacceptable
	
	• Envelopes with a peel-off adhesive strip or with more than one flap that folds over to seal must use adhesives compatible with the machine's fusing temperature of 180 °C for 0.1 second. The extra flaps and strips might cause wrinkling, creasing, or jams, and may even damage the fuser.
	• For the best print quality, position margins no closer than 15 mm from the edges of the envelope.
	• Avoid printing over the area where the envelope's seams meet.

Media type	Guidelines
Transparencies	• To avoid damaging the machine, use only transparencies designed for use in laser printers. • Transparencies used in the machine must be able to withstand 180 °C, the machine's fusing temperature. • Place them on a flat surface after removing them from the machine. • Do not leave them in the paper tray for long periods of time. Dust and dirt may accumulate on them, resulting in spotty printing. • To avoid smudging caused by fingerprints, handle them carefully. • To avoid fading, do not expose printed transparencies to prolonged sunlight. • Ensure that transparencies are not wrinkled, curled, or have any torn edges.

Labels	• To avoid damaging the machine, use only labels designed for use in laser printers.
	• When selecting labels, consider the following factors:
	  - Adhesives: The adhesive material should be stable at 180 °C, the machine's fusing temperature.
	  - Arrangement: Only use labels with no exposed backing between them. Labels can peel off sheets that have spaces between the labels, causing serious jams.
	  - Curl: Prior to printing, labels must lie flat with no more than 13 mm of curl in any direction.
	  - Condition: Do not use labels with wrinkles, bubbles, or other indications of separation.
	• Make sure that there is no exposed adhesive material between labels. Exposed areas can cause labels to peel off during printing, which can cause paper jams. Exposed adhesive can also cause damage to machine components.
	• Do not run a sheet of labels through the machine more than once. The adhesive backing is designed for only a single pass through the machine.
	• Do not use labels that are separating from the backing sheet or are wrinkled, bubbled, or otherwise damaged.

Card stock or custom-sized materials	• Do not print on media smaller than 98 mm wide or 148 mm long. • In the software application, set margins at least 6.4 mm away from the edges of the material.

Media type	Guidelines
Preprinted paper	• Letterhead must be printed with heat-resistant ink that will not melt, vaporize, or release hazardous emissions when subjected to the machine's fusing temperature of 180 °C for 0.1 second. • Letterhead ink must be non-flammable and should not adversely affect printer rollers. • Forms and letterhead should be sealed in a moisture-proof wrapping to prevent changes during storage. • Before you load preprinted paper, such as forms and letterhead, verify that the ink on the paper is dry. During the fusing process, wet ink can come off preprinted paper, reducing print quality.
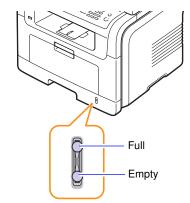
Loading paper

In the tray 1

Load the print media you use for the majority of your print jobs in the tray 1. The tray 1 can hold a maximum of 250 sheets of 75 g/m^2 plain paper.

You can purchase an optional tray (tray 2) and attach it below the standard tray to load an additional 250 sheets of paper. For order information for an optional tray, see page 12.1.
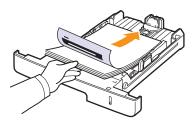
The paper level indicator on the front of the tray 1 and the optional tray 2 shows the amount of paper currently left in the tray. When the tray is empty, the indicator of the bar is completely lowered.

Full

Empty

Loading paper in the tray 1 or optional tray 2

1 Pull open the paper tray and load paper.

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

2 After loading paper, set the paper type and size for the multi-purpose tray. See page 5.8 for copying and faxing or the **Software section** for PC-printing.
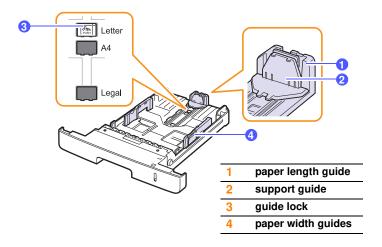
Notes
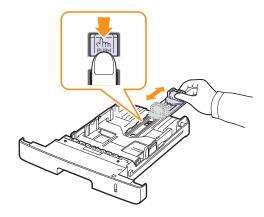
- If you experience problems with paper feed, place one sheet at a time in the multi-purpose tray.
- You can load previously printed paper. The printed side should be facing up with an uncurled edge at the front. If you experience problems with paper feed, turn the paper around. Note that print quality is not guaranteed.

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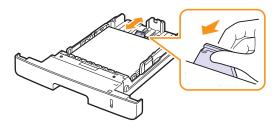
To load longer sizes of paper, such as Legal-sized paper, you need to adjust the paper guides to extend the paper tray.

1	paper length guide
2	support guide
3	guide lock
4	paper width guides
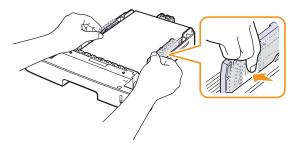
1 Press and hold the guide lock, and slide the paper length guide to locate it in the correct paper size slot.

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

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

Notes

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

In the multi-purpose tray

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

To load paper in the multi-purpose tray:

1 Open the multi-purpose tray and unfold the multi-purpose tray extension, as shown.
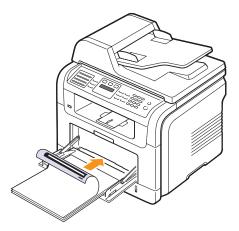
2 If you are using paper, flex or fan the edge of the paper stack to separate the pages before loading.

For transparencies, hold them by the edges and avoid touching the print side. Oils from your fingers can cause print quality problems.
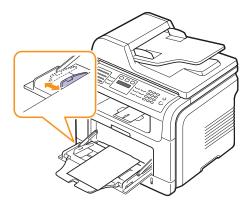
3 Load the paper **with the side to be printed on facing up**.

Notes

Depending on the media type you are using, keep the following loading guidelines:
- Envelopes: Flap side down and with the stamp area on the top left side.
- Transparencies: Print side up and the top with the adhesive strip entering the machine first.
- Labels: Print side up and top short edge entering the machine first.
- Preprinted paper: Design side up with the top edge toward the machine.
- Card stock: Print side up and the short edge entering the machine first.
- Previously printed paper: Previously printed side down with an uncurled edge toward the machine.

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

5 After loading paper, set the paper type and size for the multi-purpose tray. See page 5.8 for copying and faxing or the **Software section** for PC-printing.

Notes
- The settings made from the printer driver override the settings on the control panel.
- Make sure to open the rear cover when you print on transparencies. If not, they may tear while exiting the machine.

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

Tips on using the multi-purpose tray

• Load only one size of print media at a time in the multi-purpose tray.

• To prevent paper jams, do not add paper when there is still paper in the multi-purpose tray. This also applies to other types of print media.

• Print media should be loaded face up with the top edge going into the multi-purpose tray first and be placed in the center of the tray.

• Always load only the print media specified in page 5.2 to avoid paper jams and print quality problems.

• Flatten any curl on postcards, envelopes, and labels before loading them into the multi-purpose tray.

• Make sure to open the rear cover when you print on transparencies. If not, they may tear while exiting the machine.
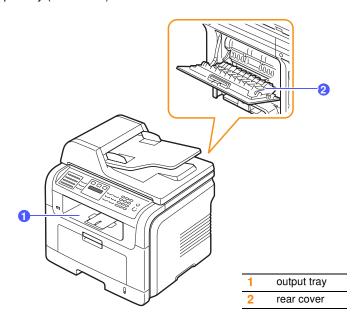
Setting the paper size and type

After loading paper in the paper tray, you need to set the paper size and type using the control panel buttons. These settings will apply to Copy and Fax modes. For PC-printing, you need to select the paper size and type in the application program you use on your PC.

1 Press **Menu** until **System Setup** appears on the bottom line of the display and press **OK**.

2 Press the **Scroll** buttons until **Paper Setup** appears and press **OK**.

3 Press **OK** when **Paper Size** appears.

4 Press the **Scroll** buttons until the paper tray you want appears and press **OK**.

5 Press the **Scroll** buttons until the paper size you are using appears and press **OK**.

6 Press **Back** to return to the upper level.

7 Press the **Scroll** buttons until **Paper Type** appears and press **OK**.

8 Press the **Scroll** buttons until the paper type you are using appears and press **OK**.

9 Press **Stop/Clear** to return to Standby mode.

Selecting an output location

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

1	output tray
2	rear cover

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

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

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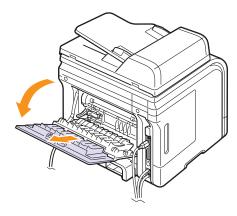
The output tray collects printed paper **face down**, in the order in which the sheets were printed. The tray should be used for most print jobs.

Printing to the rear cover

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

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

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

Note

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

6 Copying

This chapter gives you step-by-step instructions for copying documents.

This chapter includes:

- **Selecting the paper tray**
- **Copying**
- **Changing the settings for each copy**
- **Changing the default copy settings**
- **Using special copy features**
- **Copying on both sides of paper**
- **Setting copy timeout**

Selecting the paper tray

After loading the print media for copy output, you must select the paper tray you will use for copy jobs.

1 Press **Menu** until **System Setup** appears on the bottom line of the display and press **OK**.

2 Press the **Scroll** buttons until **Paper Setup** appears and press **OK**.

3 Press the **Scroll** buttons until **Paper Source** appears and press **OK**.

4 Press **OK** when **Copy Tray** appears.

5 Press the **Scroll** buttons until the paper tray you want appears and press **OK**.

6 Press **Stop**/**Clear** to return to Standby mode.

Copying

1 Press **Copy**.

   Ready to Copy appears on the top line of the display.

2 Load originals face up into the ADF, or place a single original face down on the scanner glass.

   For details about loading an original, see page 5.1.

3 Enter the number of copies using the number keypad, if necessary.

4 If you want to customize the copy settings including copy size, darkness, and original type, by using the **control panel** buttons, see page 6.1.

   If necessary, you can use special copy features, such as poster copying, 2- or 4-up copying. See page 6.2.

5 Press **Start** to begin copying.

Note

You can cancel the copy job during an operation. Press **Stop**/ **Clear**, and the copying will stop.

Changing the settings for each copy

Your machine provides default settings for copying so that you can quickly and easily make a copy. However, if you want to change the options for each copy, use the copy function buttons on the control panel.

Note

If you press **Stop**/**Clear** while setting the copy options, all of the options you have set for the current copy job will be canceled and returned to their default status. Or, they will automatically return to their default status after the machine completes the copy in progress.

Darkness

If you have an original containing faint markings and dark images, you can adjust the brightness to make a copy that is easier to read.

To adjust the darkness of copies, press **Darkness**. Each time you press the button, the following modes are available:

- **Normal**: Works well with standard typed or printed originals.
- **Light**: Works well with dark print.
- **Dark**: Works well with light print or faint pencil markings.

Original Type

The original type setting is used to improve the copy quality by selecting the document type for the current copy job.

To select the document type, press **Original Type**. Each time you press the button, the following modes are available:

- **Text**: Use for originals containing mostly text.
- **Text/Photo**: Use for originals with mixed text and photographs.
- **Photo**: Use when the originals are photographs.

Reduced or enlarged copy

By using the **Reduce**/**Enlarge** button, you can reduce or enlarge the size of a copied image from 25% to 400% when you copy original documents from the scanner glass, or from 25% to 100% from the ADF.

To select from the predefined copy sizes:

1 Press **Reduce**/**Enlarge**.

2 Press **Reduce**/**Enlarge** or the **Scroll** buttons until the size setting you want appears and press **OK**.

To scale the copy by directly entering the scale rate:

1 Press **Reduce**/**Enlarge**.

2 Press **Reduce**/**Enlarge** or the **Scroll** buttons until **Custom** appears and press **OK**.

3 Enter the scale rate and press **OK** to save the selection.

> **Note**
> When you make a reduced copy, black lines may appear at the bottom of your copy.

Changing the default copy settings

The copy options, including darkness, original type, copy size, and number of copies, can be set to those most frequently used. When you copy a document, the default settings are used unless they have been changed by using the corresponding buttons on the control panel.

1 Press **Copy**.

2 Press **Menu** until **Copy Setup** appears on the bottom line of the display and press **OK**.

3 Press **OK** when **Change Default** appears.

4 Press the **Scroll** buttons until the setup option you want appears and press **OK**.

5 Press the **Scroll** buttons until the setting you want appears and press **OK**.

6 Repeat steps 4 through 5, as needed.

7 Press **Stop**/**Clear** to return to Standby mode.

> **Note**
> While you are setting copy options, pressing **Stop**/**Clear** cancels the changed settings and restores the defaults.

Using special copy features

You can use the **following copy features:**

Collation

You can 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.

1 Press **Copy**.

2 Load originals face up into the ADF.

For details about loading an original, see page 5.1.

3 Enter the number of copies using the number keypad.

4 Press **Menu** until **Copy Feature** appears on the bottom line of the display and press **OK**.

5 Press **OK** when **Copy Collation** appears.

6 Press the **Scroll** buttons to select **Yes**.

7 Press **OK** or **Start** to begin copying.

One complete document will print followed by the second complete document.

2-up or 4-up copying

Your machine can print 2 or 4 original images reduced to fit onto one sheet of paper.

▲ 2-up copying

▲ 4-up copying

1 Press **Copy**.

2 Load originals face up in the ADF.

For details about loading an original, see page 5.1.

3 Press **Menu** until **Copy Feature** appears on the bottom line of the display and press **OK**.

4 Press the **Scroll** buttons until **2-Up** or **4-Up** appears and press **OK**.

5 Press the **Scroll** buttons to select **Yes**.

6 Press **OK** or **Start** to begin copying.

> **Note**
> You cannot adjust the copy size using the **Reduce**/**Enlarge** button for making a 2- or 4-up copy.

ID card copying

Your machine can print 2-sided originals on one sheet of A4-, Letter-, Legal-, Folio-, Executive-, B5-, A5-, or A6-sized paper.

When you copy using this feature, the machine 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 a name card.

This copy feature is available only when you place originals on the scanner glass.

1 Press **Copy**.

2 Place a single original face down on the scanner glass.

   For details about loading an original, see page 5.1.

3 Press **Menu** until **Copy Feature** appears on the bottom line of the display and press **OK**.

4 Press the **Scroll** buttons until **ID Copy** appears and press **OK**.

   Place Front Side and Press[Start] appears on the display.

5 Press **OK** or **Start**.

   Your machine begins scanning the front side and shows **Place Back Side and Press[Start]**.

6 Open the scanner lid and turn the original over.

   Note
   If you press **Stop**/**Clear** or if no buttons are pressed for approximately 30 seconds, the machine cancels the copy job and returns to Standby mode.

7 Press **Start** to begin copying.

   Note
   If the original is larger than the printable area, some portions may not be printed.

Poster copying

Your machine can print an image onto 9 sheets of paper (3x3). You can paste the printed pages together to make one poster-sized document.

This copy feature is available only when you place originals on the scanner glass.

1 Press **Copy**.

2 Place a single original face down on the scanner glass.
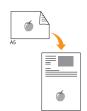
   For details about loading an original, see page 5.1.

3 Press **Menu** until **Copy Feature** appears on the bottom line of the display and press **OK**.

4 Press the **Scroll** buttons until **Poster Copy** appears and press **OK**.

5 Press the **Scroll** buttons to select **Yes**.

6 Press **OK** or **Start** to begin copying.

   Note
   You cannot adjust the copy size using the **Reduce**/**Enlarge** button when making a poster.

Your original is divided into 9 portions. Each portion is scanned and printed one by one in the following order:

1	2	3
4	5	6
7	8	9

Clone copying

Your machine can print multiple image copies from the original document on a single page. The number of images is automatically determined by the original image and paper size.

This copy feature is available only when you place originals on the scanner glass.

1 Press **Copy**.

2 Place a single original face down on the scanner glass.

For details about loading an original, see page 5.1.

3 Press **Menu** until **Copy Feature** appears on the bottom line of the display and press **OK**.

4 Press the **Scroll** buttons until **Clone Copy** appears and press **OK**.

5 Press the **Scroll** buttons to select **Yes**.

6 Press **OK** or **Start** to begin copying.

> **Note**
> You cannot adjust the copy size using the **Reduce**/**Enlarge** button while making a clone copy.

Erasing background images

You can set the machine to print 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.

1 Press **Copy**.

2 Load originals face up into the ADF, or place a single original face down on the scanner glass.

For details about loading an original, see page 5.1.

3 Press **Menu** until **Copy Feature** appears on the bottom line of the display and press **OK**.

4 Press the **Scroll** buttons until **Erase Bkgd.** appears and press **OK**.

5 Press the **Scroll** buttons to select **On** and press **OK**.

6 Press **Stop**/**Clear** to return to Standby mode.

7 Enter the number of copies using the number keypad.

8 Press **Start** to begin copying.

Copying on both sides of paper

By using the **Duplex** button on your machine, you can set the machine to print copies on both sides of paper.

1 Press **Duplex**.

2 Press the **Scroll** buttons until the binding option you want appears.
   • **Off**: Prints in Normal mode.
   • **1->2Side Short**: Prints pages to be read by flipping like a note pad.
   • **1->2Side Long**: Prints pages to be read like a book.

▲ **1->2Side Long**   ▲ **1->2Side Short**

3 Press **OK** to save your selection.

If the mode is enabled, the **Duplex** button is backlit.

4 Start copying a document.

> **Note**
> It is only available when scanning from ADF. It is not possible on scanner glass.

Setting copy timeout

You can set the time the machine waits before it restores the default copy settings, if you do not start copying after changing them on the control panel.

1 Press **Menu** until **System Setup** appears on the bottom line of the display and press **OK**.

2 Press **OK** when **Machine Setup** appears.

3 Press the **Scroll** buttons until **Timeout** appears and press **OK**.

4 Press the **Scroll** buttons until the time setting you want appears.

Selecting **Off** means that the machine does not restore the default settings until you press **Start** to begin copying, or **Stop**/**Clear** to cancel.

5 Press **OK** to save your selection.

6 Press **Stop**/**Clear** to return to Standby mode.

7 Basic printing

This chapter explains common printing tasks.

Printing a document

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

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

Canceling a print job

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

1 Click the Windows **Start** menu.

2 For Windows 98/NT 4.0/2000/Me, select **Settings** and then **Printers**.

For Windows XP/2003, select **Printers and Faxes**.

3 Double-click the **Printer Driver Type 104 PCL 6** icon.

4 From the **Document** menu, select **Cancel Printing** (Windows 98/Me) or **Cancel** (Windows NT 4.0/2000/XP/2003).

Note

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

You can also cancel the current job by pressing **Stop/Clear** on the control panel.

8 Scanning

Scanning with your machine lets you turn pictures and text into digital files that can be stored on your computer. Then you can fax or email the files, upload them to your website, or use them to create projects that you can print.

This chapter includes:

- **Scanning basics**
- **Scanning to an application using a local connection**
- **Scanning using a network connection**
- **Changing the settings for each scan job**
- **Changing the default scan settings**
- **Setting up Address Book**

Scanning basics

Your machine offers the following ways to scan an image using a local connection:

- Via one of the preset imaging applications. Scanning an image launches the selected application, enabling you to control the scanning process. See the next section.
- Via the **SmarThru™** program supplied with your machine. Scanning an image launches **SmarThru™** and enables you to control the scanning process.
- Via the Windows Images Acquisition (WIA) driver. See the **Software section**.
- To a portable USB memory device, if inserted into the USB memory port on your machine. See page 11.1.

Also, you can send scanned images to several destinations using a network connection:

- To your networked computer via the **ScanClair** program. You can scan an image from the machine, if network-connected, to the computer where the **ScanClair** program is running.
- To Email. You can send the scanned image as an attachment to an email. See page 8.4.
- To an FTP file server: You can scan an image and upload it to an FTP server. See page 8.4.
- To a computer networked via SMB (NetBEUI)[a] protocol: You can scan an image and send it to a shared folder on an SMB server. See page 8.5.

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a. A network protocol provided by Microsoft Corporation for Windows network systems.

Scanning to an application using a local connection

1 Make sure that your machine and computer are turned on and properly connected to each other.

2 Load originals face up into the ADF, or place a single original face down on the scanner glass.

For details about loading an original, see page 5.1.

3 Press **Scan**/**Email**.

Ready to Scan appears on the top line of the display.

4 Press the **Scroll** buttons until **Scan to Appl.** appears on the bottom line of the display and press **OK**.

5 Press the **Scroll** buttons until the application you want to use appears and press **OK**.

- **Microsoft Paint**: Sends the scanned image to Microsoft Paint.
- **Email**: Sends the scanned image to your default email program on your computer. A new message window opens with the image attached.
- **My Document**: Saves the scanned image in the default folder, **My Documents**, on your computer.
- **SmarThru**: Sends the scanned image to **SmarThru™**, installed with the printer driver.
- **OCR**: Sends the scanned image to the OCR program for text recognition.

> **Note**
>
> You can add more TWAIN-compliant software for scanning, such as Adobe Photoshop Deluxe, or Adobe Photoshop, from the **Printer Settings Utility**. See the **Software section**.

6 On the selected application, adjust the scan settings and begin scanning. For details, please refer to the application user's guide.

Scanning using a network connection

If you have connected your machine to a network and set up network parameters correctly, you can scan and send images over the network.

Preparing for network scanning

Before using your machine's network scanning features, you need to configure the following settings depending on your scan destination:

- Adding the machine to the **ScanClair** program for scanning to a network client
- Registering as an authorized user for scanning to Email, FTP, or SMB
- Setting up an account for scanning to Email
- Setting up FTP servers for scanning to FTP
- Setting up SMB servers for scanning to SMB

Adding the machine to the ScanClair program

First, install the **ScanClair** program. See the **Software section**.

To scan images from your machine to your computer through the network, you need to register the machine as an authorized network scanner in the **ScanClair** program.

1   In Windows, select **Start** → **Programs** → **ScanClair** → **ScanClair**.

    The **ScanClair** window opens.

2   Click the **Add Device** button or double-click the **Add Device** icon.

3   Click **Next**.

4   Select **Browse for a scanner. (recommended)**, or select **Connect to this scanner.** and enter the IP address of your machine.

5   Click **Next**.

    A list of the scanners on your network appears.

6   Select your machine from the list and enter a name, user ID, and PIN (Personal Identification Number) for the machine.

    Notes
    - For the scanner name, the model name of your machine is automatically entered, but can be changed.
    - You can enter an ID of up to 8 characters. The first character must be a letter.
    - The PIN must be 4 digits.

7   Click **Next**.

8   Click **Finish**.

    Your machine is added to the **ScanClair** program and you can now scan images through the network.

Note
You can change the scanner properties of your machine and the scan settings from the **ScanClair** window. Click **Properties** and set the options in each tab.

Registering authorized users

To use an FTP server or SMB server, or to send an email, you need to register authorized users using **Web Image Monitor Type 104**. You can add up to 50 users.

1   Enter your machine's IP address as the URL in a browser and click **Go** to access the web site of your machine.

2   Click **Machine Settings** and **User Authentication**.

3   Click **Add**.

4   Select the index number where the corresponding entry will be stored, from 1 to 50.

5   Enter your name, user ID, password, and e-mail address.

    You need to enter the registered user ID and password in the machine when you start scanning to FTP, SMB or e-mail from the control panel.

6   Click **Apply**.

Setting up an e-mail account

To scan and send an image as an email attachment, you need to set up network parameters using **Web Image Monitor Type 104**.

1   Enter your machine's IP address as the URL in a browser and click **Go** to access the web site of your machine.

2   Click **Machine Settings** and **E-mail Setup**.

3   Select **IP Address** or **Host Name**.

4   Enter the IP address in dotted decimal notation or as a host name.

5   Enter the server port number, from 1 to 65535.

    The default port number is 25.

6   Put a check mark in **SMTP Requires Authentication** to require authentication.

7   Enter the SMTP server login name and password.

Setting up an FTP server

To use an FTP server, you need to set up parameters for access to FTP servers using **Web Image Monitor Type 104**.

1   Enter your machine's IP address as the URL in a browser and click **Go** to access the web site of your machine.

2   Click **Machine Settings** and **FTP Setup**.

3   Click **Server List**.

4 Click **Add**.

5 Select the index number, from 1 to 20.

6 Enter a name in **Alias for the Setup** for the corresponding Server List entry. This name will be displayed on your machine.

7 Select **IP Address** or **Host Name**.

8 Enter the server address in dotted decimal notation or as a host name.

9 Enter the server port number, from 1 to 65535.

The default port number is 21.

10 Put a check mark in **Anonymous** if you want to allow the FTP server to be accessed by unauthorized persons.

By default, this is unchecked.

11 Enter the login name and password.

12 Enter the location the scanned image will be stored. This is the location you have entered in the step 6.

13 Click **Apply**.

Setting up an SMB server

To use an SMB server, you need to set up parameters for access to SMB servers using **Web Image Monitor Type 104**.

1 Enter your machine's IP address as the URL in a browser and click **Go** to access the web site of your machine.

2 Click **Machine Settings** and **SMB Setup**.

3 Click **Server List**.

4 Click **Add**.

5 Select the index number, from 1 to 20.

6 Enter a name in **Alias for the Setup** for the corresponding Server List entry. This name will be displayed on your machine.

7 Select **IP Address** or **Host Name**.

8 Enter the server address in dotted decimal notation or as a host name.

9 Enter the server port number, from 1 to 65535.

The default port number is 139.

10 Enter the share name of the server.

11 Put a check mark in **Anonymous** if you want to allow the SMB server to be accessed by unauthorized persons.

By default, this is unchecked.

12 Enter the login name and password.

13 Enter the domain name of the SMB server.

14 Enter the location the scanned image will be stored. This is the location you have entered in the step 6.

15 Click **Apply**.

Scanning to a network client

Network client allows you to remotely scan an original from your network-connected machine to your computer in JPEG, TIFF, or PDF file format.

Scanning

1 Make sure that your machine and the computer are connected to a network and **ScanClair** is running on the computer.

2 Load originals face up into the ADF, or place a single original face down on the scanner glass.

For details about loading an original, see page 5.1.

3 Press **Scan/Email**.

4 Press the **Scroll** buttons until **NetScan** appears on the bottom line of the display and press **OK**.

5 Enter the ID you have set in the **ScanClair** window and press **OK**.

6 Enter the PIN you have set in the **ScanClair** window and press **OK**.

7 If the scan destination is folder type, press the **Scroll** buttons until the scan setting option you want appears and press **OK**. Or, press **Start** to immediately start scanning using the default settings.

   • **Scan Size**: Sets the image size.
   • **Original Type**: Sets the original document's type.
   • **Resolution**: Sets the image resolution.
   • **Scan Color**: Sets the color mode.
   • **Scan Format**: Sets the file format in which the image is to be saved. If you select TIFF or PDF, you can select to scan multiple pages.

If the scan destination is application type, go to the step 11.

8 Press the **Scroll** buttons until the desired status appears and press **OK**.

9 Press **Start** to start scanning.

Your machine begins scanning the original to the computer where the program is running.

10 Press the **Scroll** buttons until the application you want appears and press **OK**. Scanning is started.

Setting network scan timeout

If the **ScanClair** program on your computer does not send a refresh request and does not scan a job within a specified timeout period, your machine cancels the scan job. You can change this timeout setting as needed.

1   Press **Menu** until **System Setup** appears on the bottom line of the display and press **OK**.

2   Press **OK** when **Machine Setup** appears.

3   Press the **Scroll** buttons until **NetScanTimeout** appears and press **OK**.

4   Enter the desired timeout value and press **OK**.

The change will be broadcast over the network and will apply to all clients connected to the network.

5   Press **Stop**/**Clear** to return to Standby mode.

Scanning to Email

You can scan and send an image as an email attachment. You first need to set up your email account in **Web Image Monitor Type 104**. See page 8.2.

Before scanning, you can set the scan options for your scan job. See page 8.5.

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

2   Load originals face up into the ADF, or place a single original face down on the scanner glass.

For details about loading an original, see page 5.1.

3   Press **Scan**/**Email**.

4   Press the **Scroll** buttons until **Scan to Email** appears on the bottom line of the display and press **OK**.

5   Enter the recipient's email address and press **OK**.

If you have set up **Address Book**, you can use a speed button or a speed email or group email number to retrieve an address from memory. See page 8.5.

6   To enter additional addresses, press **OK** when **Yes** appears and repeat step 5.

To continue to the next step, press the **Scroll** buttons to select **No** and press **OK**.

7   If the display asks if you want to send the email to your account, press the **Scroll** buttons to select **Yes** or **No** and press **OK**.

> **Note**
>
> This prompt does not appear if you have activated the **Send To Self** option in the email account setup.

8   Enter an email subject and press **OK**.

9   Press the **Scroll** buttons until the file format you want appears and press **OK** or **Start**.

The machine begins scanning and then sends the email.

10   If the machine asks if you want to log off your account, press the **Scroll** buttons to select **Yes** or **No** and press **OK**.

11   Press **Stop**/**Clear** to return to Standby mode.

Scanning to an FTP server

You can scan an image and then upload it to an FTP server. You need to set up parameters for access to FTP servers from **Web Image Monitor Type 104**. See page 8.2.

Before scanning, you can set the scan options for your scan job. See page 8.5.

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

2   Load originals face up into the ADF or place a single original on the scanner glass.

For details about loading an original, see page 5.1.

3   Press **Scan**/**Email**.

4   Press the **Scroll** buttons until **Scan to FTP** appears on the bottom line of the display and press **OK**.

5   Enter the user ID and press **OK**.

6   Enter the password and press **OK**.

7   Press the **Scroll** buttons until the FTP server you want appears and press **OK** or **Start**.

8   Press the **Scroll** buttons until the file type you want appears and press **OK** or **Start**.

The machine begins scanning and then sends the file to the specified server.

Scanning to an SMB server

You can scan an image and then send it to an SMB server. You need to set up parameters for access to SMB servers from **Web Image Monitor Type 104**. See page 8.3.

Before scanning, you can set the scan options for your scan job. See page 8.5.

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

2   Load originals face up into the ADF or place a single original on the scanner glass.

    For details about loading an original, see page 5.1.

3   Press **Scan**/**Email**.

4   Press the **Scroll** buttons until **Scan to SMB** appears on the bottom line of the display and press **OK**.

5   Enter the user ID and press **OK**.

6   Enter the password and press **OK**.

7   Press the **Scroll** buttons until the SMB server you want appears and press **OK** or **Start**.

8   Press the **Scroll** buttons until the file format you want appears and press **OK** or **Start**.

    The machine begins scanning and then sends the file to the specified server.

Changing the settings for each scan job

Your machine provides you with the following setting options to allow you to customize your scan jobs.

- **Scan Size**: Sets the image size.
- **Original Type**: Sets the original document's type.
- **Resolution**: Sets the image resolution.
- **Scan Color**: Sets the color mode.
- **Scan Format**: Sets the file format in which the image is to be saved. If you select TIFF or PDF, you can select to scan multiple pages. Depending on the selected scan type, this option may not appear.

To customize the settings before starting a scan job:

1   Press **Scan**/**Email**.

2   Press **Menu** until **Scan Feature** appears on the bottom line of the display and press **OK**.

3   Press the **Scroll** buttons until the scan type you want appears and press **OK**.

4   Press the **Scroll** buttons until the scan setting option you want appears and press **OK**.

5   Press the **Scroll** buttons until the desired status appears and press **OK**.

6   Repeat steps 4 and 5 to set other setting options.

7   When you have finished, press **Stop**/**Clear** to return to Standby mode.

Changing the default scan settings

To avoid having to customize the scan settings for each job, you can set up default scan settings for each scan type.

1   Press **Scan**/**Email**.

2   Press **Menu** until **Scan Setup** appears on the bottom line of the display and press **OK**.

3   Press **OK** when **Change Default** appears.

4   Press the **Scroll** buttons until the scan type you want appears and press **OK**.

5   Press the **Scroll** buttons until the scan setting option you want appears and press **OK**.

6   Press the **Scroll** buttons until the desired status appears and press **OK**.

7   Repeat steps 5 and 6 to change other settings.

8   To change the default settings for other scan types, press **Back** and repeat from step 4.

9   Press **Stop**/**Clear** to return to Standby mode.

Setting up Address Book

You can set up **Address Book** with the email addresses you use frequently via **Web Image Monitor Type 104** and then easily and quickly enter email addresses by entering the location numbers assigned to them in **Address book**.

Registering speed email numbers

1   Enter your machine's IP address as the URL in a browser and click **Go** to access the web site of your machine.

2   Click **Machine Settings** and **Local Address Book**.

3   Click **Add**.

4   Select a location number and enter the user name and e-mail address you want.

5   Click **Apply**.

> **Note**
> You can also click **Import** and obtain your address book from your computer.

Configuring group email numbers

1   Enter your machine's IP address as the URL in a browser and click **Go** to access the web site of your machine.

2   Click **Machine Settings** and **Group Address Book**.

3   Click **Add**.

4   Select a group number and enter the group name you want.

5   Select speed email numbers that will be included in the group.

6   Click **Apply**.

Using Address Book entries

To retrieve an email address, use the following ways:

Speed email numbers

When you are prompted to enter a destination address while sending an email, enter the speed email number at which you stored the address you want.

• For a one-digit speed email location, press and hold the corresponding digit button from the number keypad.

• For a two- or three-digit speed email location, press the first digit button(s) and then hold down the last digit button.

You can also press the speed buttons at which you stored the address you want.

You can also search through memory for an entry by pressing **Address Book**. See page 8.6.

Group email numbers

To use a group email entry, you need to search for and select it from memory.

When you are prompted to enter a destination address while sending an email, press **Address Book**. See page 8.6.

Searching Address Book for an entry

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

Searching sequentially through memory

1   If necessary, press **Scan**/**Email**.

2   Press **Address Book** until **Search&Send** appears on the bottom line of the display and press **OK**.

3   Press the **Scroll** buttons until the number category you want appears and press **OK**.

4   Press **OK** when **All** appears.

5   Press the **Scroll** buttons until the name and address you want appears. You can search upwards or downwards through the entire memory in alphabetical order.

Searching with a particular first letter

1   If necessary press **Scan**/**Email**.

2   Press **Address Book** until **Search&Send** appears on the bottom line of the display and press **OK**.

3   Press the **Scroll** buttons until the number category you want appears and press **OK**.

4   Press the **Scroll** buttons until **ID** appears and press **OK**.

5   Enter the first few letters of the name you want and press **OK**.

6   Press the **Scroll** buttons until the name you want appears and press **OK**.

Printing Address Book

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

1   Press **Address Book** until **Print** appears on the bottom line of the display.

2   Press **OK**. A list showing your speed button settings, and the speed/group email entries print out.

9 Faxing

This chapter gives you information about using your machine as a fax machine.

This chapter includes:

Sending a fax
- **Setting the fax header**
- **Adjusting the document settings**
- **Sending a fax automatically**
- **Sending a fax manually**
- **Confirming a transmission**
- **Automatic redialing**
- **Redialing the last number**

Receiving a fax
- **Selecting the paper tray**
- **Changing receiving modes**
- **Receiving automatically in Fax mode**
- **Receiving manually in Tel mode**
- **Receiving automatically in Ans/Fax mode**
- **Receiving manually using an extension telephone**
- **Receiving faxes using DRPD mode**
- **Receiving in secure receiving mode**
- **Receiving faxes in memory**
- **Printing received faxes on both sides of paper**

Other ways to fax
- **Sending a fax to multiple destinations**
- **Sending a delayed fax**
- **Sending a priority fax**
- **Forwarding faxes**

Sending a fax

Setting the fax header

In some countries, you are required by law to indicate your fax number on any fax you send. The Machine ID, containing your telephone number and name or company name, will be printed at the top of each page sent from your machine.

1   Press **Menu** until **System Setup** appears on the bottom line of the display and press **OK**.

2   Press **OK** when **Machine Setup** appears.

3   Press **OK** when **Machine ID** appears.

4   Enter your name or the company name using the number keypad.

    You can enter alphanumeric characters using the number keypad, and include special symbols by pressing the **0** button.

    For details on how to enter alphanumeric characters, see page 2.3.

5   Press **OK** to save the ID.

6   Press the **Scroll** buttons until **Machine Fax No.** appears and press **OK**.

7   Enter your fax number using the number keypad and press **OK**.

8   Press **Stop/Clear** to return to Standby mode.

Adjusting the document settings

Before starting a fax, change the following settings according to your original's status to get the best quality.

Resolution

The default document settings produce 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.

1   Press **Resolution**.

2   Press **Resolution** or the **Scroll** buttons until the option you want appears.

3   Press **OK** to save your selection.

Recommended resolution settings for different original document types are described in the table below:

Mode	Recommended for:
Standard	Originals with normal sized characters.
Fine	Originals containing small characters or thin lines or originals printed using a dot-matrix printer.
Super Fine	Originals containing extremely fine detail. Super Fine mode is enabled only if the machine with which you are communicating also supports the Super Fine resolution. **Notes** • For memory transmission, **Super Fine** mode is not available. The resolution setting is automatically changed to **Fine**. • When your machine is set to **Super Fine** resolution and the fax machine with which you are communicating does not support **Super Fine** resolution, the machine transmits using the highest resolution mode supported by the other fax machine.
Photo Fax	Originals containing shades of gray or photographs.
Color Fax	Originals with colors. Sending a color fax is enabled only if the machine with which you are communicating supports color fax reception and you send the fax manually. In this mode, memory transmission is not available.

Note
The resolution setting is applied to the current fax job. To change the default setting, see page 10.2.

Darkness

You can select the default contrast mode to fax your originals lighter or darker.

1   Press **Fax**.

2   Press **Menu**, and then **OK** when **Fax Feature** appears on the bottom line of the display.

3   Press **OK** when **Darkness** appears.

4   Press the **Scroll** buttons until the option you want appears and press **OK**.

5   Press **Stop**/**Clear** to return to Standby mode.

Note
The darkness setting is applied to the current fax job. To change the default setting, see page 10.2.

Sending a fax automatically

1   Press **Fax**.

2   Load originals face up into the ADF, or place a single original face down on the scanner glass.

    For details about loading an original, see page 5.1.

    Ready to Fax appears on the top line of the display.

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

4   Enter the receiving fax machine's number.

    You can use speed buttons, speed dial numbers, or group dial numbers. For details about storing and searching for a number, see page 10.3.

5   Press **Start**.

6   If an original is placed on the scanner glass, select **Yes** to add another page. Load another original and press **OK**.

7   When you have finished, select **No** at the **Another Page?** prompt.

    After the number is dialed, the machine begins sending the fax when the receiving fax machine answers.

Note
When you want to cancel a fax job, press **Stop**/**Clear** at any time while sending.

Sending a fax manually

1   Press **Fax**.

2   Load originals face up into the ADF, or place a single original face down on the scanner glass.

    For details about loading an original, see page 5.1.

3   Adjust the resolution and the darkness to suit your fax needs. See page 9.1.

4   Press **On Hook Dial**. You hear a dial tone.

5   Enter the receiving fax machine's number.

    You can use speed buttons, speed dial numbers, or group dial numbers. For details about storing and searching for a number, see page 10.3.

6   Press **Start** when you hear a high-pitched fax signal from the remote fax machine.

Note
When you want to cancel a fax job, press **Stop**/**Clear** at any time while sending.

Confirming a transmission

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

When something goes wrong while sending your fax, an error message appears on the display. For a list of error messages and their meanings, see page 14.7. If you receive an error message, press **Stop**/**Clear** to clear the message and try to send the fax again.

You can set your machine to print a confirmation report automatically each time sending a fax is completed. For further details, see page 10.1.

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 every three minutes, up to seven times according to the factory default settings.

When the display shows **Retry Redial?**, press **OK** to redial the number without waiting. To cancel the automatic redialing, press **Stop**/**Clear**.

To change the time interval between redials and the number of redial attempts. See page 10.1.

Redialing the last number

To redial the number you called last:

1   Press **Redial**/**Pause**.

2   When an original is loaded in the ADF, 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** at the **Another Page?** prompt.

Receiving a fax

Selecting the paper tray

After loading the print media for fax output, you have to select the paper tray you will use for the fax reception.

1   Press **Menu** until **System Setup** appears on the bottom line of the display and press **OK**.

2   Press the **Scroll** buttons until **Paper Setup** appears and press **OK**.

3   Press the **Scroll** buttons until **Paper Source** appears and press **OK**.

4   Press the **Scroll** buttons until **Fax Tray** appears and press **OK**.

5   Press the **Scroll** buttons until the paper tray you want appears and press **OK**.

6   Press **Stop**/**Clear** to return to Standby mode.

Changing receiving modes

1   Press **Fax**.

2   Press **Menu** until **Fax Setup** appears on the bottom line of the display and press **OK**.

3   Press the **Scroll** buttons until **Receiving** appears and press **OK**.

4   Press **OK** when **Receive Mode** appears.

5   Press the **Scroll** buttons until the fax reception mode you want appears.

• In **Fax** mode, the machine answers an incoming fax call and immediately goes into the fax reception mode.

• In **Tel** mode, you can receive a fax by pressing **On Hook Dial** and then **Start**. You can also pick up the handset of the extension phone and then press the remote receive code. See page 9.4.

• In **Ans**/**Fax** mode, an answering machine attached to 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. See page 9.4.

• In **DRPD** mode, 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 page 9.4.

6   Press **OK** to save your selection.

7 Press **Stop/Clear** to return to Standby mode.

Receiving automatically in Fax mode

Your machine is preset to **Fax** mode at the factory. When you receive a fax, the machine answers the call on a specified number of rings and automatically receives the fax.

To change the number of rings, see page 10.1.

Receiving manually in Tel mode

You can receive a fax call by pressing **On Hook Dial** and then pressing **Start** when you hear a fax tone from the remote machine.

The machine begins receiving a fax and returns to Standby mode when the reception is completed.

Receiving manually using an extension telephone

This features works best when you are using an extension telephone connected to the EXT socket on the back of your machine. 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 $\ast 9 \ast$ on the extension phone. The machine receives the fax.

Press the buttons slowly in sequence. If you still hear the fax tone from the remote machine, try pressing $\ast 9 \ast$ once again.

$\ast 9 \ast$ 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 wish. For details about changing the code, see page 10.1.

Receiving automatically in Ans/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 as it would normally. If your machine detects a fax tone on the line, it automatically starts to receive the fax.

Receiving faxes using DRPD mode

Distinctive Ring is a telephone company service which enables an user to use a single telephone line to answer several different telephone numbers. The particular number someone uses to call you is identified by different ringing patterns, which consist of various combinations of long and short ringing sounds. 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.

Using the Distinctive Ring Pattern Detection (DRPD) feature, your fax machine can learn the ring pattern you designate to be answered by the fax machine. Unless you change it, this ringing pattern will continue to be recognized and answered as a fax call, and all other ringing patterns will be forwarded to the extension telephone or answering machine plugged into the EXT socket. You can easily suspend or change DRPD at any time.

Before using the DRPD option, Distinctive Ring service must be installed on your telephone line by the telephone company. To set up DRPD, you will need another telephone line at your location, or someone available to dial your fax number from outside.

To set up the **DRPD** mode:

1 Press **Fax**.

2 Press **Menu** until **Fax Setup** appears on the bottom line of the display and press **OK**.

3 Press the **Scroll** buttons until **Receiving** appears and press **OK**.

4 Press the **Scroll** buttons until **DRPD Mode** appears and press **OK**.

   Waiting Ring appears on the display.

5 Call your fax number from another telephone. It is not necessary to place the call from a fax machine.

6 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. Press **OK** when **DRPD Mode** appears and start over from step 4.

7 Press **Stop/Clear** to return to Standby mode.

When the DRPD feature is set up, the **DRPD** option is available for the receiving mode setting. To receive faxes in DRPD mode, you need to set the menu to **DRPD**.

> **Notes**
> • 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

You may need to prevent your received faxes from being accessed by unauthorized people. You can turn on secure receiving mode to restrict printing of received faxes when the machine is unattended. In secure receiving mode, all incoming faxes go into memory. When the mode is deactivated, any stored faxes are printed.

Activating secure receiving mode

1 Press **Fax**.

2 Press **Menu** and then press **OK** when **Fax Feature** appears on the bottom line of the display.

3 Press the **Scroll** buttons until **Secure Receive** appears and press **OK**.

4 Press the **Scroll** buttons until **On** appears and press **OK**.

5 Enter a four-digit password you want to use and press **OK**.

> **Note**
> You can activate secure receiving mode without setting a password, but cannot protect your faxes.

6 Re-enter the password to confirm it and press **OK**.

7 Press **Stop/Clear** to return to Standby mode.

When a fax is received in secure receiving mode, your machine stores it in memory and shows **Secure Receive** to let you know that there is a fax received.

Printing received faxes

1 Access the **Secure Receive** menu by following steps 1 through 3 in "Activating secure receiving mode".

2 Press the **Scroll** buttons until **Print** appears and press **OK**.

3 Enter the four-digit password and press **OK**.

The machine prints all of the faxes stored in memory.

Deactivating secure receiving mode

1 Access the **Secure Receive** menu by following steps 1 through 3 in "Activating secure receiving mode".

2 Press the **Scroll** buttons until **Off** appears and press **OK**.

3 Enter the four-digit password and press **OK**.

The mode is deactivated and the machine prints all faxes stored in memory.

4 Press **Stop/Clear** to return to Standby mode.

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.

Printing received faxes on both sides of paper

By using the **Duplex** button on your machine, you can set the machine to print received faxes on both sides of paper.

1 Press **Duplex**.

2 Press the **Scroll** buttons until the binding option you want appears.
 • **Off**: Prints in Normal mode.
 • **1->2Side Short**: Prints pages to be read by flipping like a note pad.
 • **1->2Side Long**: Prints pages to be read like a book.

▲ **1->2Side Long**   ▲ **1->2Side Short**

3 Press **OK** to save your selection.

If the mode is enabled, the **Duplex** button is backlit.

Other ways to fax

Sending a fax to multiple destinations

You can use the Multiple Send feature, which allows you to send a fax to multiple locations. Originals are automatically stored in memory and sent to a remote station. After transmission, the originals are automatically erased from memory.

1 Press **Fax**.

2 Load originals face up into the ADF, or place a single original face down on the scanner glass.

For details about loading an original, see page 5.1.

3 Adjust the document resolution and darkness to suit your fax needs. See page 9.1.

4 Press **Menu** until **Fax Feature** appears on the bottom line of the display and press **OK**.

5 Press the **Scroll** buttons until **Multi Send** appears and press **OK**.

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

You can use speed buttons, speed dial numbers, or group dial numbers. For details, see page 10.3.

7 Enter the second fax number and press **OK**.

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

8 To enter more fax numbers, press **OK** when **Yes** appears and repeat steps 6 and 7. You can add up to 209 destinations.

> **Note**
> You cannot use group dial numbers for another fax number.

9 When you have finished entering fax numbers, select **No** at the **Another No.?** prompt and press **OK** or **Start**.

The original is scanned into memory before transmission. The display shows memory capacity and the number of pages being stored in memory.

10 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** at the **Another Page?** prompt.

The machine begins sending the fax to the numbers you entered in the order in which you entered them.

Sending a delayed fax

You can set your machine to send a fax at a later time when you will not be present.

1 Press **Fax**.

2 Load originals face up into the ADF, or place a single original face down on the scanner glass.

   For details about loading an original, see page 5.1.

3 Adjust the document resolution and darkness to suit your fax needs. See page 9.1.

4 Press **Menu** until **Fax Feature** appears on the bottom line of the display and press **OK**.

5 Press the **Scroll** buttons until **Delay Send** appears and press **OK**.

6 Enter the number of the receiving machine using the number keypad.

   You can use speed buttons, speed dial numbers, or group dial numbers. For details, see page 10.3.

7 Press **OK** to confirm the number. The display asks you to enter another fax number to which to send the document.

8 To enter more fax numbers, press **OK** when **Yes** appears and repeat steps 6 and 7. You can add up to 10 destinations.

   Note
   You cannot use group dial numbers for another fax number.

9 When you have finished entering fax numbers, press the **Scroll** buttons to select **No** at the **Another No.?** prompt and press **OK**.

10 Enter the job name you want and press **OK**.

   For details on how to enter alphanumeric characters, see page 2.3.

   If you do not want to assign a name, skip this step.

11 Enter the time using the number keypad and press **OK** or **Start**.

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

   The original is scanned into memory before transmission. The display shows memory capacity and the number of pages being stored in memory.

12 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** at the **Another Page?** prompt.

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

Adding pages to a delayed fax

You can add pages to the delayed transmissions previously reserved in your machine's memory.

1 Load the originals to be added and adjust document settings.

2 Press **Menu** until **Fax Feature** appears on the bottom line of the display and press **OK**.

3 Press **OK** when **Add Page** appears.

4 Press the **Scroll** buttons until the fax job you want appears and press **OK**.

   The machine scans the original into memory and shows the total number of pages and the number of the added pages.

Canceling a delayed fax

1 Press **Menu** until **Fax Feature** appears on the bottom line of the display and press **OK**.

2 Press the **Scroll** buttons until **Cancel Job** appears and press **OK**.

3 Press the **Scroll** buttons until the fax job you want appears and press **OK**.

4 Press **OK** when **Yes** appears.

   The selected fax is deleted from memory.

Sending a priority fax

Using the Priority Fax feature, a high priority fax can be sent ahead of reserved operations. The original is scanned into memory and immediately transmitted when the current operation is finished. In addition, priority transmission will interrupt a Multiple Send operation between stations (i.e., when the transmission to station A ends, before transmission to station B begins) or between redial attempts.

1 Press **Fax**.

2 Load originals face up into the ADF, or place a single original face down on the scanner glass.

   For details about loading an original, see page 5.1.

3 Adjust the document resolution and darkness to suit your fax needs. See page 9.1.

4 Press **Menu** until **Fax Feature** appears on the bottom line of the display and press **OK**.

5 Press the **Scroll** buttons until **Priority Send** appears and press **OK**.

6 Enter the number of the receiving machine.

   You can use speed buttons or speed dial numbers. For details, see page 10.3.

7 Press **OK** to confirm the number.

8 Enter the job name you want and press **OK**.

The original is scanned into memory before transmission. The display shows memory capacity and the number of pages being stored in memory.

9 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** at the **Another Page?** prompt.

The machine shows the number being dialed and begins sending the fax.

Forwarding faxes

You can forward your incoming and outgoing faxes to another fax machine or email address.

Forwarding sent faxes to another fax machine

You can set the machine to send copies of all outgoing faxes to a specified destination, in addition to the fax numbers you entered.

1 Press **Fax**.

2 Press **Menu** until **Fax Feature** appears on the bottom line of the display and press **OK**.

3 Press the **Scroll** buttons until **Forward** appears and press **OK**.

4 Press **OK** when **Fax** appears.

5 Press the **Scroll** buttons until **Send Forward** appears and press **OK**.

6 Press the **Scroll** buttons to select **On** and press **OK**.

7 Enter the number of the fax machine to which faxes are to be sent and press **OK**.

8 Press **Stop**/**Clear** to return to Standby mode.

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

Forwarding sent faxes to email address

You can set the machine to send copies of all outgoing faxes to a specified destination, in addition to the email address you entered.

1 Press **Fax**.

2 Press **Menu** until **Fax Feature** appears on the bottom line of the display and press **OK**.

3 Press the **Scroll** buttons until **Forward** appears and press **OK**.

4 Press the **Scroll** buttons until **E-mail** appears and press **OK**.

5 Press the **Scroll** buttons until **Send Forward** appears and press **OK**.

6 Press the **Scroll** buttons to select **On** and press **OK**.

7 Enter your email address and press **OK**.

8 Enter the email address to which faxes are to be sent and press **OK**.

9 Press **Stop**/**Clear** to return to Standby mode.

Subsequent sent faxes will be forwarded to the specified email address.

Forwarding received faxes to another fax machine

You can set your machine to forward incoming faxes to another fax number during a specified time period. When a fax arrives at your machine, it is stored in memory. Then, the machine dials the fax number that you have specified and sends the fax.

1 Press **Fax**.

2 Press **Menu** until **Fax Feature** appears on the bottom line of the display and press **OK**.

3 Press the **Scroll** buttons until **Forward** appears and press **OK**.

4 Press **OK** when **Fax** appears.

5 Press the **Scroll** buttons until **Rcv. Forward** appears and press **OK**.

6 Press the **Scroll** buttons until **Forward** appears and press **OK**.

To set the machine to print out a fax when fax forwarding has been completed, select **Forward&Print**.

7 Enter the number of the fax machine to which faxes are to be sent and press **OK**.

8 Enter the starting time and press **OK**.

9 Enter the ending time and press **OK**.

10 Press **Stop**/**Clear** to return to Standby mode.

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

Forwarding received faxes to email address

You can set your machine to forward incoming faxes to the email address you entered.

1 Press **Fax**.

2 Press **Menu** until **Fax Feature** appears on the bottom line of the display and press **OK**.

3 Press the **Scroll** buttons until **Forward** appears and press **OK**.

4 Press the **Scroll** buttons until **E-mail** appears and press **OK**.

5 Press the **Scroll** buttons until **Rcv. Forward** appears and press **OK**.

6 Press the **Scroll** buttons until **Forward** appears and press **OK**.

To set the machine to print out a fax when fax forwarding has been completed, select **Forward&Print**.

7 Enter your email address and press **OK**.

8 Enter the email address to which faxes are to be sent and press **OK**.

9 Press **Stop**/**Clear** to return to Standby mode.

Subsequent received faxes will be forwarded to the specified email address.

10 Fax setup

This chapter gives you information on setting up your machine for receiving and sending faxes.

This chapter includes:

- **Changing the fax setup options**
- **Changing the default document settings**
- **Printing sent fax report automatically**
- **Change the dial tone detection settings**
- **Setting up Phone Book**

Changing the fax setup options

Your machine provides you with various user-selectable options for setting up the fax system. You can change the default settings for your preferences and needs.

To change the fax setup options:

1. Press **Fax**.

2. Press **Menu** until **Fax Setup** appears on the bottom line of the display and press **OK**.

3. Press the **Scroll** buttons to select **Sending** or **Receiving** and press **OK**.

4. Press the **Scroll** buttons until the menu item you want appears and press **OK**.

5. Press the **Scroll** buttons until the desired status appears or enter the value for the option you have selected, and press **OK**.

6. If necessary, repeat steps 4 through 5.

7. Press **Stop/Clear** to return to Standby mode.

Sending options

Option	Description
Redial Times	You can specify the number of redial attempts. If you enter **0**, the machine will not redial.
Redial Term	Your machine can automatically redial a remote fax machine if it was busy. You can set an interval between attempts.
Prefix Dial	You can set 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[a]	This mode helps with poor line quality and makes sure any faxes you send are sent smoothly to any other ECM-equipped fax machine. Sending a fax using ECM may take more time.

Option	Description
Sent Report	You can set your machine to print a confirmation report showing whether a transmission was successful, how many pages were sent, and more. The available options are **On**, **Off**, and **On-Error**, which prints only when a transmission is not successful.
Image TCR[b]	You can prevent the actual faxed material from being included in the confirmation report for privacy or security protection.
Dial Mode	This setting may not be available depending on your country. If you cannot reach this option, your machine does not support this feature. You can set the dial mode for your machine to either tone dialing or pulse dialing. If you have a public telephone system or a private branch exchange (PBX) system, you may need to select **Pulse**. Contact your local telephone company if you are not sure which dial mode to use. **Note** If you select **Pulse**, some phone system features might not be available. It can also take longer to dial a fax or phone number.

a. Error Correction Mode
b. Transmission Confirmation Report

Receiving options

Option	Description
Receive Mode	You can select the default fax receiving mode. For details on receiving faxes in each mode, see page 9.3.
Ring to Answer	You can specify the number of times the machine rings before answering an incoming call.
Stamp Rcv Name	This option allows the machine to automatically print the page number, and the date and time of reception at the bottom of each page of a received fax.
Rcv Start Code	This code allows you to initiate 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.

Option	Description
Auto Reduction	When receiving a fax containing pages as long as or longer than the paper loaded in the paper tray, the machine can reduce the size of the original to fit the size of the paper loaded in the machine. Turn on this feature if you want to automatically reduce an incoming page. With this feature set to **Off**, the machine cannot reduce the original to fit onto one page. The original will be divided and printed in actual size on two or more pages.
Discard Size	When receiving a fax containing pages as long as or longer than the paper in your machine, you can set the machine to discard a specific length from the end of the received fax. The machine will print the received fax on one or more sheets of paper, minus the data that would have been on the specified discard segment. When the received fax contains pages larger than the paper in your machine, and **Auto Reduction** has been turned on, the machine will reduce the fax to fit on the existing paper, and nothing will be discarded.
Junk Fax Setup	Using this feature, the system will not accept faxes sent from remote stations whose numbers are stored in the memory as junk fax numbers. This feature is useful for blocking any unwanted faxes. When you turn on this feature, you can access the following options to set junk fax numbers. • **Add**: allows you to set up to 10 fax numbers. • **Delete**: allows you to delete the desired junk fax number. • **Delete All**: allows you to delete all junk fax numbers.
DRPD Mode[a]	This mode enables a user to use a single telephone line to answer several different telephone numbers. In this menu, you can set the machine to recognize which ring patterns to answer. For details about this feature, see page 9.4.

a. Distinctive Ring Pattern Detection

Changing the default document settings

The fax options, including resolution and darkness, can be set to the most frequently used modes. When you send a fax, the default settings are used if they are not changed by using the corresponding button and menu.

1 Press **Fax**.

2 Press **Menu** until **Fax Setup** appears on the bottom line of the display and press **OK**.

3 Press the **Scroll** buttons until **Change Default** appears and press **OK**.

4 Press **OK** when **Resolution** appears.

5 Press the **Scroll** buttons until the resolution you want appears and press **OK**.

6 Press the **Scroll** buttons until **Darkness** appears and press **OK**.

7 Press the **Scroll** buttons until the darkness you want appears and press **OK**.

8 Press **Stop**/**Clear** to return to Standby mode.

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**.

2 Press **Menu** until **Fax Setup** appears on the bottom line of the display and press **OK**.

3 Press the **Scroll** buttons until **Auto Report** appears and press **OK**.

4 Press the **Scroll** buttons until **On** appears and press **OK**.

5 Press **Stop**/**Clear** to return to Standby mode.

Change the dial tone detection settings

The Dial Tone Detection feature can ensure that your telephone exchange is ready to receive the dialing.

1 Press **Fax**.

2 Press **Menu** until **Fax Setup** appears on the bottom line of the display and press **OK**.

3 Press the **Scroll** buttons until **DT Detection** appears and press **OK**.

4 Press the **Scroll** buttons until **On** appears and press **OK**.

• **On**: Your machine detects the dial tone before your machine start dialing.

• **Off**: The machine starts dialing without checking the dial tone from your telephone exchanger.

5 Press **Stop**/**Clear** to return to Standby mode.

Note

There are regions where the dial tone cannot be detected by your machine. If the Dial Tone Detection feature is set to **On** and dialing does not start automatically, set this feature to **Off**.

Setting up Phone Book

You can set up **Phone Book** with the fax numbers you use most frequently. Your machine provides you with the following features for setting up **Phone Book**:

- Speed buttons
- Speed/Group dial numbers

> **Note**
> Before beginning to store fax numbers, make sure that your machine is in Fax mode.

Speed buttons

The 15 speed buttons on the control panel lets you store frequently-used fax numbers. You will be able to enter a fax number with the touch of a button. By utilizing the **Shift** button, you can store up to 30 numbers on the speed buttons.

There are two ways to assign numbers to speed buttons. Examine the procedures below and use the appropriate way which you prefer:

Registering after pressing a speed button

1   Press **Fax**.

2   Press one of the speed buttons.

3   Press **OK** when **Yes** appears.

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

   For details on how to enter alphanumeric characters, see page 2.3.

5   Enter the fax number you want to store and press **OK**.

Registering after entering a number first

1   Press **Fax**.

2   Enter the fax number you want to store.

3   Press one of the speed buttons.

4   Press **OK** when **Yes** appears.

> **Note**
> If you press a speed button already assigned, the display asks if you want to overwrite. Press **OK** to confirm **Yes** and continue. To start over with another speed button, select **No**.

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

   For details on how to enter alphanumeric characters, see page 2.3.

6   Press **OK** to confirm the number.

Using speed buttons

When you are prompted to enter a fax number while sending a fax:

- To retrieve a number from speed buttons 1 to 15, press the corresponding speed button and press **OK**.
- To retrieve a number from speed buttons 16 to 30, press **Shift** and then the corresponding speed button, and press **OK**.

Speed dial numbers

You can store up to 240 frequently-used fax numbers in speed dial numbers.

Registering a speed dial number

1   Press **Fax**.

2   Press **Address Book** until **New&Edit** appears on the bottom line of the display and press **OK**.

3   Press **OK** when **Speed Dial** appears.

4   Enter a speed dial number between 0 and 239 and press **OK**.

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

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

   For details on how to enter alphanumeric characters, see page 2.3.

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

7   Press **Stop/Clear** to return to Standby mode.

Editing speed dial numbers

1   Press **Address Book** until **New&Edit** appears on the bottom line of the display and press **OK**.

2   Press **OK** when **Speed Dial** appears.

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

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

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

6   Press **Stop/Clear** to return to Standby 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 a two- or three-digit speed dial number, press the first digit button(s) and then hold down the last digit button.

You can also search through memory for an entry by pressing **Address Book**. See page 10.4.

Group dial numbers

If you frequently send the same document to several destinations, you can group these destinations and set them under a group dial number. You can then use a group dial number to send a document to all of the destinations within the group. You can set up to 200 (0 through 199) group dial numbers using the destination's existing speed dial numbers.

Registering a group dial number

1   Press **Fax**.

2   Press **Address Book** until **New&Edit** appears on the bottom line of the display and press **OK**.

3   Press the **Scroll** buttons until **Group Dial** appears and press **OK**.

4   Enter a group dial number between 0 and 199 and press **OK**.

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

6   Press **OK** when **Yes** appears.

7   Repeat steps 5 and 6 to include other speed dial numbers into the group.

8   When you have finished, press the **Scroll** buttons to select **No** at the **Another No.?** prompt and press **OK**.

9   Press **Stop/Clear** to return to Standby mode.

Editing a group dial number

You can delete a specific entry from a group or add a new number to the selected group.

1   Press **Address Book** until **New&Edit** appears on the bottom line of the display and press **OK**.

2   Press the **Scroll** buttons until **Group Dial** appears and press **OK**.

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

4   Enter the speed dial number you want to add or delete and press **OK**.

    If you entered a new speed dial number, **Add?** appears.

    If you enter a speed dial number stored in the group, **Delete?** appears.

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

6   Press **OK** when **Yes** appears to add or delete more numbers and repeat from step 4.

7   When you have finished, press the **Scroll** buttons to select **No** at the **Another No.?** prompt and press **OK**.

8   Press **Stop/Clear** to return to Standby mode.

Using group dial numbers

To use a group dial entry, you need to search for and select it from memory.

When you are prompted to enter a fax number while sending a fax, press **Address Book**. See below.

Searching Phone 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.

Searching sequentially through the memory

1   If necessary, press **Fax**.

2   Press **Address Book** until **Search&Dial** appears on the bottom line of the display and press **OK**.

3   Press the **Scroll** buttons until the number category you want appears and press **OK**.

4   Press **OK** when **All** appears.

5   Press the **Scroll** buttons until the name and number you want appears. You can search upwards or downwards through the entire memory in alphabetical order.

Searching with a particular first letter

1   If necessary, press **Fax**.

2   Press **Address Book** until **Search&Dial** appears on the bottom line of the display and press **OK**.

3   Press the **Scroll** buttons until the number category you want appears and press **OK**.

4   Press the **Scroll** buttons until **ID** appears and press **OK**.

5   Enter the first few letters of the name you want and press **OK**.

6   Press the **Scroll** buttons until the name you want appears and press **OK**.

Deleting a Phone Book entry

You can delete entries in **Phone Book** one by one.

1   Press **Address Book** until **Delete** appears on the bottom line of the display and press **OK**.

2   Press the **Scroll** buttons until the number category you want appears and press **OK**.

3   Press the **Scroll** buttons until the searching method you want appears and press **OK**.

    Select **Search All** to search for an entry by scanning through all entries in **Phone Book**.

Select **Search ID** to search for an entry by the first few letters of the name.

4　Press the **Scroll** buttons until the name you want appears and press **OK**.

Or, enter the first letters and press **OK**. Press the **Scroll** buttons until the name you want appears and press **OK**.

5　Press **OK**.

6　Press **OK** when **Yes** appears to confirm the deletion.

7　Press **Stop/Clear** to return to Standby mode.

Printing Phone Book

You can check your **Phone Book** settings by printing a list.

1　Press **Address Book** until **Print** appears on the bottom line of the display.

2　Press **OK**. A list showing your speed button settings, and speed dial and group dial entries prints out.

11 Using USB flash memory

This chapter explains how to use a USB memory device with your machine.

This chapter includes:

- **About USB memory**
- **Plugging in a USB memory device**
- **Scanning to a USB memory device**
- **Printing from a USB memory device**
- **Backing up data**
- **Managing USB memory**

About USB memory

USB memory devices are available with a variety of memory capacities to give you more room for storing documents, presentations, downloaded music and videos, high resolution photographs, or whatever other files you want to store or move.
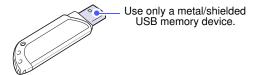
You can do the following on your machine using a USB memory device:

- Scan documents and save them on a USB memory device.
- Print data stored on a USB memory device.
- Back up **Address Book**/**Phone Book** entries and the system settings of your machine.
- Restore backup files to the machine's memory.
- Format the USB memory device.
- Check the available memory space.

Plugging in a USB memory device

The USB memory port on the front of your machine is designed for USB V1.1 and USB V2.0 memory devices. Your machine supports USB memory devices with capacity of up to 512 MB.
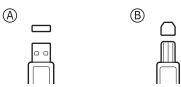
You must use only an authorized USB memory device with an A plug type connector.

Use only a metal/shielded USB memory device.
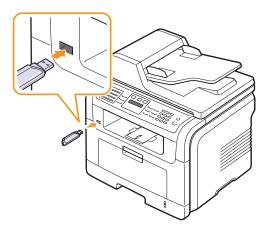
> **Note**
> There are two USB plug types.

Ⓐ   Ⓑ

Insert a USB memory device into the USB memory port on the front of your machine.

> **Notes**
> - Do not remove the USB memory device while the machine is in operation, or writing to or reading from USB memory. This may damage your machine.
> - If your USB memory device has certain features, such as security settings and password settings, your machine may not automatically detect it. For details about these features, see the device's User's Guide.

Scanning to a USB memory device

You can scan a document and save the scanned image onto a USB memory device. There are two ways of doing this: you can scan to the device using the default settings, or you can customize your own scan settings.

Scanning

1 Insert a USB memory device into the USB memory port on your machine.

2 Load originals face up into the ADF, or place a single original face down on the scanner glass.

   For details about loading an original, see page 5.1.

3 Press **Scan**/**Email**.

4 Press **OK** when **Scan to USB** appears on the bottom line of the display.

5 Press **OK** or **Start** when **USB** appears.

Your machine begins scanning the original, and then asks if you want to scan another page.

6 Press **OK** when **Yes** appears to scan more pages. Load an original and press **Start**.

Otherwise, press the **Scroll** buttons to select **No** and press **OK**.

After scanning is complete, you can remove the USB memory device from the machine.

Customizing Scan to USB

You can specify image size, file format, or color mode for each scanning to USB job.

1 Press **Scan/Email**.

2 Press **Menu** until **Scan Feature** appears on the bottom line of the display and press **OK**.

3 Press **OK** when **USB Memory** appears.

4 Press the **Scroll** buttons until the setting option you want appears and press **OK**.

You can set the following options:

- **Scan Size**: Sets the image size.
- **Original Type**: Sets the original document's type.
- **Resolution**: Sets the image resolution.
- **Scan Color**: Sets the color mode.
- **Scan Format**: Sets the file format in which the image is to be saved. When you select TIFF or PDF, you can select to scan multiple pages.

5 Press the **Scroll** buttons until the desired status appears and press **OK**.

6 Repeat steps 4 and 5 to set other setting options.

7 When you have finished, press **Stop/Clear** to return to Standby mode.

Printing from a USB memory device

You can directly print files stored on a USB memory device. You can print TIFF, BMP, JPEG, PDF, and PRN files.

Direct Print option supported file types:

- PRN: PCL 6 compatible.
- PRN files can be created by selecting the Print to file check box when you print a document. The document will be saved as a PRN file, rather than printed on paper. Only PRN files created in this fashion can be printed directly from USB memory.
  See the Software section to learn how to create a PRN file.
- BMP: BMP Uncompressed
- TIFF: TIFF 6.0 Baseline
- JPEG: JPEG Baseline
- PDF: PDF 1.4 and below

To print a document from a USB memory device:

1 Insert a USB memory device into the USB memory port on your machine. If one has already been inserted, press **USB Print**.

Your machine automatically detects the device and reads data stored on it.

2 Press the **Scroll** buttons until the folder or file you want appears and press **OK**.

If you see **D** in the front of a folder name, there are one or more folders in the selected folder.

3 If you selected a file, skip to the next step.

If you selected a folder, press the **Scroll** buttons until the file you want appears.

4 Press **OK**, **Start**, or **USB Print** to start printing the selected file.

5 If you selected a TIFF, BMP, or JPEG file in step 2, press the **Scroll** buttons to select the number of copies to be printed or enter the number and press **OK**.

After printing the file, the display asks if you want to print another job.

6 Press **OK** when **Yes** appears to print another job, and repeat from step 2.

Otherwise, press the **Scroll** buttons to select **No** and press **OK**.
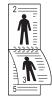
7 Press **Stop/Clear** to return to Standby mode.

Printing on both sides of paper

By using the **Duplex** button on your machine, you can set the machine to print documents on both sides of paper.

1　Press **Duplex**.

2　Press the **Scroll** buttons until the binding option you want appears.
   • **Off**: Prints in Normal mode.
   • **1->2Side Short**: Prints pages to be read by flipping like a note pad.
   • **1->2Side Long**: Prints pages to be read like a book.

▲ **1->2Side Long**　　　▲ **1->2Side Short**

3　Press **OK** to save your selection.

   If the mode is enabled, the **Duplex** button is backlit.

Backing up data

Data in the machine's memory can be accidentally erased due to power failure or storage failure. Backup helps you protect your **Address Book**/**Phone Book** entries and the system settings by storing them as backup files on a USB memory device.

Backing up data

1　Insert the USB memory device into the USB memory port on your machine.

2　Press **Menu** until **System Setup** appears on the bottom line of the display and press **OK**.

3　Press **OK** when **Machine Setup** appears.

4　Press the **Scroll** buttons until **Export Setting** appears and press **OK**.

5　Press the **Scroll** buttons until the option you want appears.
   • **Address Book**: Backs up all **Address Book**/**Phone Book** entries.
   • **Setup Data**: Backs up all system settings.

6　Press **OK** to begin backing up the data.

   The data is backed up to the USB memory.

7　Press **Stop**/**Clear** to return to Standby mode.

Restoring data

1　Insert the USB memory device on which the backup data is stored in to the USB memory port.

2　Press **Menu** until **System Setup** appears on the bottom line of the display and press **OK**.

3　Press **OK** when **Machine Setup** appears.

4　Press the **Scroll** buttons until **Import Setting** appears and press **OK**.

5　Press the **Scroll** buttons until the data type you want appears and press **OK**.

6　Press the **Scroll** buttons until the file containing the data you want to restore appears and press **OK**.

7　Press **OK** when **Yes** appears to restore the backup file to the machine.

8　Press **Stop**/**Clear** to return to Standby mode.

Managing USB memory

You can delete image files stored on a USB memory device one by one or all at once by reformatting the device.

> **Note**
> After deleting files or reformatting a USB memory device, files cannot be restored. Therefore, confirm that you no longer need the data before deleting it.

Deleting an image file

1　Insert the USB memory device into the USB memory port on your machine.

2　Press **Scan**/**Email**.

3　Press **OK** when **Scan to USB** appears on the bottom line of the display.

4　Press the **Scroll** buttons until **File Manage** appears and press **OK**.

5　Press **OK** when **Delete** appears.

6　Press the **Scroll** buttons until the folder or file you want appears and press **OK**.

> **Note**
> If you see **D** in the front of a folder name, there are one or more folders in the selected folder.

If you selected a file, the display shows the size of the file for about 2 seconds. Go to the next step.

If you selected a folder, press the **Scroll** buttons until the file you want to delete appears and press **OK**.

7   Press **OK** when **Yes** appears to confirm your selection.

8   Press **Stop/Clear** to return to Standby mode.

Formatting a USB memory device

1   Insert the USB memory device into the USB memory port on your machine.

2   Press **Scan/Email**.

3   Press **OK** when **Scan to USB** appears on the bottom line of the display.

4   Press the **Scroll** buttons until **File Manage** appears and press **OK**.

5   Press the **Scroll** buttons until **Format** appears and press **OK**.

6   Press **OK** when **Yes** appears to confirm your selection.

7   Press **Stop/Clear** to return to Standby mode.

Viewing the USB memory status

You can check the amount of memory space available for scanning and saving documents.

1   Insert the USB memory device into the USB memory port on your machine.

2   Press **Scan/Email**.

3   Press **OK** when **Scan to USB** appears on the bottom line of the display.

4   Press the **Scroll** buttons until **Check Space** appears and press **OK**.

       The available memory space appears on the display.

5   Press **Stop/Clear** to return to the Standby mode.

12 Supplies and accessories

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

Toner cartridges

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

Type	Yield[a]
Standard yield	Approx. 8,000 pages

a. Declared yield value in accordance with ISO/IEC 19752.

Accessories

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

The following accessories are available for your machine:

Accessory	Description
Optional tray	If you are experiencing frequent paper supply problems, you can attach an additional 250 sheet tray. You can print documents on various sizes and types of print materials.
Memory DIMM	Extends your machine's memory capacity.

Note
Your machine comes with 64 MB of on-board memory and a 32 MB DIMM. To expand the memory of your machine, you must remove the existing DIMM and purchase a larger one.

13 Maintenance

This chapter provides information for maintaining your machine and the toner cartridge.

This chapter includes:

- **Printing reports**
- **Clearing memory**
- **Cleaning your machine**
- **Maintaining the toner cartridge**
- **Managing your machine from the website**
- **Checking the machine's serial number**

Printing reports

Your machine can provide various reports with useful information you will need. The following reports are available:

Report/List	Description
Configuration	This list shows the status of the user-selectable options. You may print this list to confirm your changes after changing settings.
Address Book	This list shows all of the fax numbers and email addresses currently stored in the machine's memory.
Send Report	This report shows the fax number, the number of pages, the elapsed time of the job, the communication mode, and the communication results for a particular fax job. You can set up your machine to automatically print a transmission confirmation report after each fax job. See page 10.1.
Sent Report	This report shows information on the faxes and emails you have recently sent. You can set the machine to automatically print this report every 50 communications. See page 10.2.
Fax Rcv Report	This report shows information on the faxes you have recently received.
Schedule Jobs	This list shows the documents currently stored for delayed faxes along with the starting time and type of each operation.
JunkFax Report	This list shows the fax numbers specified as junk fax numbers. To add or delete numbers to or from this list, access the **Junk Fax Setup** menu.

Report/List	Description
Network Info.	This list shows information on your machine's network connection and configuration.
NetScan Report	This report shows information for the Network Scan records including IP address, time and date, the number of pages scanned, and results. This report is automatically printed every 50 network scan jobs.
User Auth List	This list shows authorized users who are allowed to use the email function.

Printing a report

1. Press **Menu** until **System Setup** appears on the bottom line of the display and press **OK**.

2. Press the **Scroll** buttons until **Report** appears and press **OK**.

3. Press the **Scroll** buttons until the report or list you want to print appears and press **OK**.

   To print all reports and lists, select **All Report**.

4. Press **OK** when **Yes** appears to confirm printing.

   The selected information prints out.

Other available reports

Your machine prints the following reports automatically or depending on your setting.

- **Multi-communication Report**: prints automatically after sending faxes from more than one location.

- **Power Failure Report**: prints out automatically when power is restored after a power failure if any data loss occurs due to the power failure.

Clearing memory

You can selectively clear information stored in your machine's memory.

> **Note**
>
> Before clearing the memory, make sure that all fax jobs have been completed, or you will lose those jobs.

1 Press **Menu** until **System Setup** appears on the bottom line of the display and press **OK**.

2 Press the **Scroll** buttons until **Clear Setting** appears and press **OK**.

3 Press the **Scroll** buttons until the item you want to clear appears.

Options	Description
All Settings	Clears all of the data stored in memory and resets all of your settings to the factory default.
Fax Setup	Restores all of the fax options to the factory default.
Copy Setup	Restores all of the copy options to the factory default.
Scan Setup	Restores all of the scan options to the factory default.
System Setup	Restores all of the system options to the factory default.
Network	Restores all of the network options to the factory default.
Address Book	Clears all of the fax number and email address entries stored in memory.
Sent Report	Clears all records of sent faxes and emails.
Fax Rcv Report	Clears all records of received faxes.
NetScan Report	Clears the information on network scan sessions in memory.

4 Press **OK** when **Yes** appears.

5 Press **OK** again to confirm clearing.

6 Repeat steps 3 through 5 to clear another item.

7 Press **Stop/Clear** to return to Standby mode.

Cleaning your machine

To maintain print and scan quality, follow the cleaning procedures below each time the toner cartridge is replaced or if print and scan quality problems occur.

> **Note**
>
> Cleaning the cabinet of the machine with cleaning materials containing large amounts of alcohol, solvent, or other strong substances can discolor or distort the cabinet.
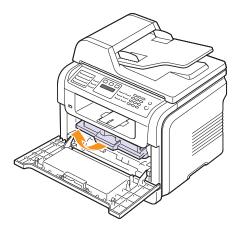
Cleaning the outside

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

Cleaning the inside

During the printing process, paper, toner, and dust particles can accumulate inside the machine. This buildup can cause print quality problems, such as toner specks or smearing. Cleaning the inside of the machine clears or reduces these problems.
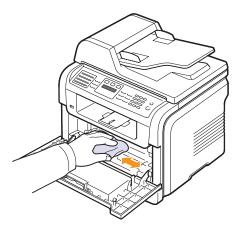
1 Turn the machine off and unplug the power cord. Wait for the machine to cool down.

2 Open the front cover and pull the toner cartridge out. Set it on a clean flat surface**.**

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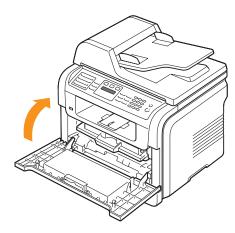> - Do not touch the green surface underside of the toner cartridge. Use the handle on the cartridge to avoid touching this area.

3 With a dry lint-free cloth, wipe away any dust and spilled toner from the toner cartridge area and the toner cartridge cavity.
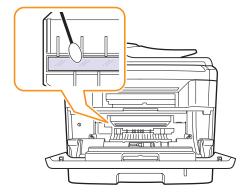
> **Note**
>
> While cleaning the inside of the machine, be careful not to touch the transfer roller, located underneath the toner cartridge. Oil from your fingers can cause print scan quality problems.

4 Locate the long strip of glass (LSU) inside the top of the cartridge compartment, and gently swab the glass to see if dirt turns the white cotton black.
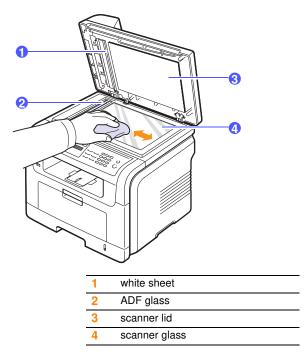
5 Reinsert the toner cartridge and close the front cover.

6 Plug in the power cord and turn the machine on.

Cleaning the scan unit

Keeping the scan unit clean helps ensure the best possible copies. We suggest that you clean the scan unit at the start of each day and during the day, as needed.

1 Slightly dampen a soft lint-free cloth or paper towel with water.

2 Open the scanner lid.

3 Wipe the surface of the scanner glass and ADF glass until it is clean and dry.

1	white sheet
2	ADF glass
3	scanner lid
4	scanner glass

4 Wipe the underside of the scanner lid and white sheet until it is clean and dry.

5 Close the scanner lid.

Maintaining the toner cartridge

Toner cartridge storage

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

• Do not remove the toner cartridge from its package until ready for use.

• Do not refill the toner cartridge. **The machine warranty does not cover damage caused by using a refilled cartridge.**

• Store toner cartridges in the same environment as your machine.

• To prevent damage to the toner cartridge, do not expose it to light for more than a few minutes.

Expected cartridge life

The toner cartridge yield depends on the amount of toner that print jobs require. Average yield for a new toner cartridge is 8,000 standard pages in accordance with the ISO/IEC 19752 standard. (Average yield for the original toner cartridge supplied with the machine is 4,000 standard pages.) The actual number may also be different depending on the print density of the pages you print on, and the number of pages may be affected by operating environment, printing interval, media type, and media size. If you print a lot of graphics, you may need to change the cartridge more often.

Redistributing toner

When the toner cartridge is near the end of its life:
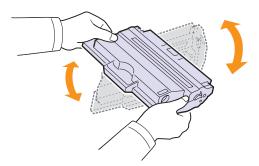
• White streaks or light printing occurs.

• **Toner Low** appears on the display.

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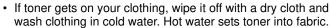
If this happens, you can temporarily reestablish print quality by redistributing the remaining toner in the cartridge. In some cases, white streaks or light printing will still occur even after you have redistributed the toner.

1 Open the front cover.

2 Pull the toner cartridge out.
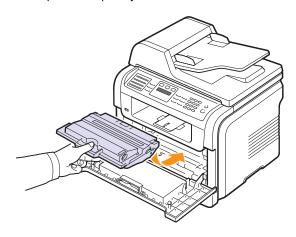
3 Thoroughly roll the cartridge 5 or 6 times to distribute the toner evenly inside the cartridge.

Notes

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

• Do not touch the green underside of the toner cartridge. Use the handle on the cartridge to avoid touching this area.

4 Hold the toner cartridge by the handle and slowly insert the cartridge into the opening in the machine.

Tabs on the sides of the cartridge and corresponding grooves within the machine will guide the cartridge into the correct position until it locks into place completely.

5 Close the front cover. Make sure that the cover is securely closed.

Replacing the toner cartridge

When the toner cartridge is completely empty:
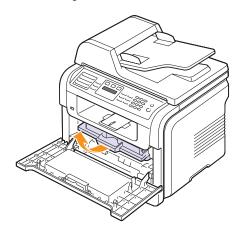
- **Toner Empty** appears on the display.
- The **Status** LED blinks red.
- The machine stops printing. Incoming faxes are saved in memory.

At this stage, the toner cartridge needs to be replaced. For order information for toner cartridges, see page 12.1.
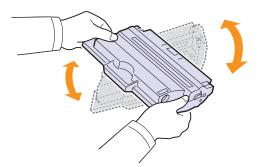
> **Note**
>
> You can set the machine to disregard the **Toner Empty** message and to continue printing. See page 13.6.

1 Open the front cover.

2 Pull the toner cartridge out.

3 Remove the new toner cartridge from its bag.

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

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

> **Notes**
>
> - If toner gets on your clothing, wipe it off with a dry cloth and wash clothing in cold water. Hot water sets toner into fabric.
> - Do not touch the green underside of the toner cartridge. Use the handle on the cartridge to avoid touching this area.

5 Hold the toner cartridge by the handle and slowly insert the cartridge into the opening in the machine.

Tabs on the sides of the cartridge and corresponding grooves within the machine will guide the cartridge into the correct position until it locks into place completely.

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

Cleaning the drum

If there are streaks or spots on your print, the OPC drum of the toner cartridge may require cleaning.

1 Before starting the cleaning procedure, make sure that paper is loaded in the machine.

2 Press **Menu** until **System Setup** appears on the bottom line of the display and press **OK**.

3 Press the **Scroll** buttons until **Maintenance** appears and press **OK**.

4 Press **OK** when **Clean Drum** appears.

The machine prints out a cleaning page. Toner particles on the drum surface are affixed to the paper.

If the problem remains, repeat steps 1 through 4.

Sending new toner notification

You can set your machine to automatically send a fax to your service company or dealer to notify them that your machine requires a new toner cartridge when the toner cartridge needs to be replaced. The fax number needs to be set by your dealer prior to using this feature, otherwise the machine cannot send a notification even though you turn this service on.

1   Press **Menu** until **System Setup** appears on the bottom line of the display and press **OK**.

2   Press the **Scroll** buttons until **Maintenance** appears and press **OK**.

3   Press the **Scroll** buttons until **Remote Service** appears and press **OK**.

4   Enter a password and press **OK**.

5   Re-enter the password and press **OK**.

6   Press the **Scroll** buttons to select **On** and press **OK**.

7   Press **Stop/Clear** to return to Standby mode.

Once this feature has been enabled, you need to enter the password each time you disable or enable it.

Printing continuously when the Toner Empty message appears

When the toner cartridge is nearly empty, the machine shows the **Toner Empty** message and stops printing. You can set the machine to disregard this message when it appears and to continue printing, even though print quality is not optimal.

1   Press **Menu** until **System Setup** appears on the bottom line of the display and press **OK**.

2   Press the **Scroll** buttons until **Maintenance** appears and press **OK**.

3   Press the **Scroll** buttons until **Ignore Toner** appears and press **OK**.

4   Press the **Scroll** buttons until the desired status appears and press **OK**.

If you select off, the received fax cannot be printed until you install a new toner cartridge. However, faxes can be received into memory as long as it allows

5   Press **Stop/Clear** to return to Standby mode.

Clearing the Toner Empty Replace Toner message

When the **Toner Empty Replace Toner** message appears you can configure not to see this message again not to disturb you.

1   Press **Menu** until **System Setup** appears on the bottom line of the display and press **OK**.

2   Press the **Scroll** buttons until **Maintenance** appears and press **OK**.

3   Press the **Scroll** buttons until **CLR Empty Msg.** appears and press **OK**.

4   Select **On** and press **OK**.

5   Now the **Toner Empty Replace Toner** message does not appear but the **Replace Toner** message will remain for reminding you that the new cartridge needs to be installed for quality.

> **Note**
>
> Once you have selected **On**, this setting will be permanently written to the memory of the toner cartridge, and this menu will be disappeared from the **Maintenance** menu.

Managing your machine from the website

If you have connected your machine to a network and set up TCP/IP network parameters correctly, you can manage the machine via **Web Image Monitor Type 104**, an embedded web server. Use **Web Image Monitor Type 104** to:

• View the machine's device information and check its current status.

• Change TCP/IP parameters and set up other network parameters.

• Change the printer properties.

• Set the machine to send email notifications to let you know the machine's status.

• Get support for using the machine.

To access **Web Image Monitor Type 104**:

1   Start a web browser, such as Internet Explorer, from Windows.

2   Enter the machine IP address (http://xxx.xxx.xxx.xxx) in the address field and press the **Enter** key or click **Go**.

Your machine's embedded website opens.

Checking the machine's serial number

When you call for service, the machine's serial number may be required.

You can check the serial number by taking the following steps:

1   Press **Menu** until **System Setup** appears on the bottom line of the display and press **OK**.

2   Press the **Scroll** buttons until **Maintenance** appears and press **OK**.

3   Press the **Scroll** buttons until **Serial Number** appears and press **OK**.

4   Check your machine's serial number.

5   Press **Stop/Clear** to return to Standby mode.

14 Troubleshooting

This chapter gives helpful information for what to do if you encounter an error.

This chapter includes:

- **Clearing document jams**
- **Clearing paper jams**
- **Understanding display messages**
- **Solving other problems**

Clearing document jams
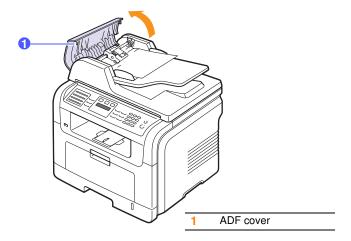
When an original jams while passing through the ADF, **Document Jam** appears on the display.

> **Caution**
> To avoid tearing the document, pull out the jammed document gently and slowly.

1 Remove any remaining pages from the ADF.

2 Open the ADF cover.

1	ADF cover

3 Pull the jammed paper gently out of the ADF.
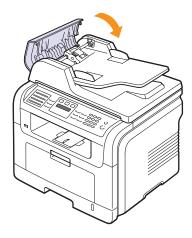
> **Note**
> If you do not see the paper in this area, refer to Roller misfeed. See page 14.2.

4 Close the ADF cover. Then load the removed pages, if any, back into the ADF.
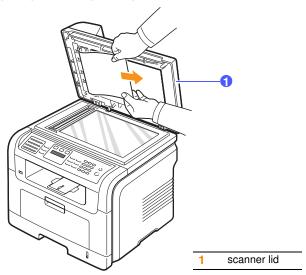
> **Note**
> To prevent document jams, use the scanner glass for thick, thin, or mixed paper-type originals.

Roller misfeed

1 Open the scanner lid.

2 Seize the misfed paper, and remove the paper from the feed area by carefully pulling it to the right using both hands.

| 1 | scanner lid |

3 Close the scanner lid. Then load the removed pages back into the ADF.

Clearing paper jams

When a paper jam occurs, **Paper Jam** appears on the display. Refer to the table below to locate and clear the paper jam.

Message	Location of jam	Go to
[Paper Jam 0] **Open/Close Door**	In the paper feed area (tray 1, optional tray 2, or multi-purpose tray)	below and page 14.3
[Paper Jam 1] **Open/Close Door**	In the fuser area or around the toner cartridge	page 14.3
[Paper Jam 2] **Check Inside**	In the paper exit area	page 14.4
[Duplex Jam 0] **Check Inside**	In the duplex unit	page 14.5
[Duplex Jam 1] **Check Inside**	Between the duplex unit and fuser area	page 14.6

Note
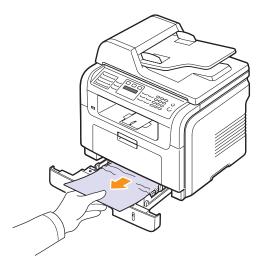
To avoid tearing the paper, pull out the jammed paper gently and slowly. Follow the instructions in the following sections to clear the jam.

In the tray 1

1 Open and close the front cover. The jammed paper is automatically ejected from the machine.

If the paper does not exit, go to the next step.

2 Pull the tray 1 open.

3 Remove the jammed paper by gently pulling it straight out.
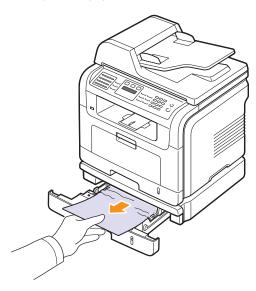
If the paper does not move when you pull, or if you do not see the paper in this area, check the fuser area around the toner cartridge. See page 14.3.

4 Insert the tray 1 into the machine until it snaps into place. Printing automatically resumes.

In the optional tray 2
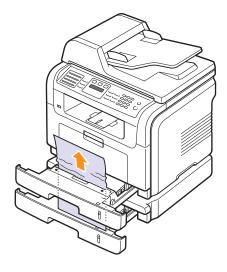
1 Pull the optional tray 2 open.

2 Remove the jammed paper from the machine.

If the paper does not move when you pull, or if you do not see the paper in this area, stop and go to step 3.
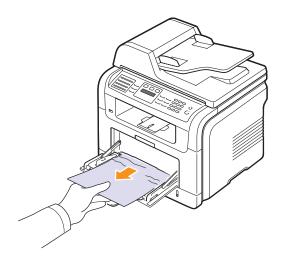
3 Pull the tray 1 half.

4 Pull the paper straight up and out.

5 Insert the trays back into the machine. Printing automatically resumes.

In the multi-purpose tray

1 If the paper is not feeding properly, pull the paper out of the machine.
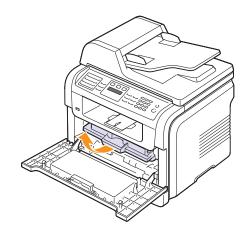
2 Open and close the front cover to resume printing.

In the fuser area or around the toner cartridge
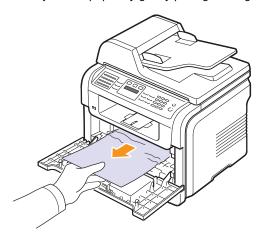
⚠️ **Warning**
The fuser area is hot. Take care not to burn your fingers when removing paper from the machine.

1 Open the front cover and pull the toner cartridge out, lightly pushing it down.
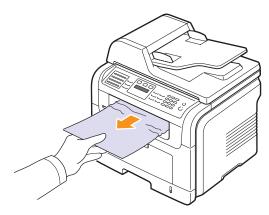
2 Remove the jammed paper by gently pulling it straight out.

4 If you see the jammed paper, push the pressure lever on each side up and remove the paper. Skip to step 9.

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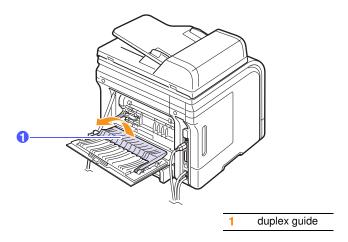
If you still do not see the paper, go to the next step.

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

In the paper exit area

1 Open and close the front cover. The jammed paper is automatically ejected from the machine.

2 Gently pull the paper out of the output tray.
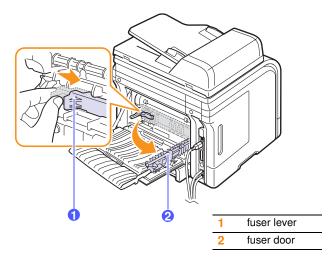
5 Release the white strip, the rear cover stopper, and fully open the rear cover, as shown.

1	rear cover stopper
2	rear cover

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

3 Open the rear cover.

6   Unfold the duplex guide fully.

1	duplex guide
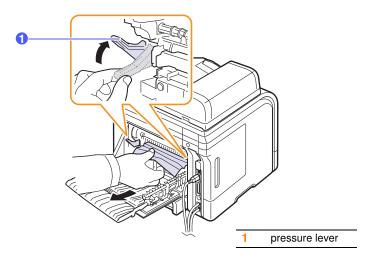
7   While pushing the fuser lever to the right, open the fuser door.

1	fuser lever
2	fuser door

8   Pull the jammed paper out.

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

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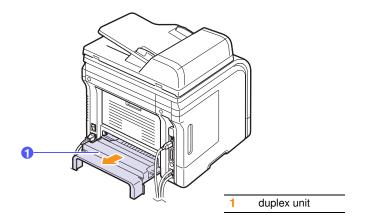
9   Return the lever, door, stopper, and guide to their original position.

10   Close the rear cover. Printing automatically resumes.

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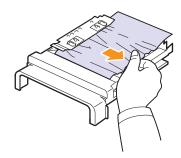
If the duplex unit is not inserted correctly, paper jam may occur. Make sure that the duplex unit is inserted correctly.

Duplex Jam 0
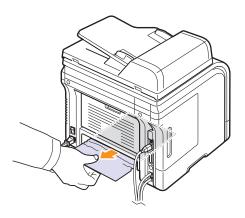
1   Pull the duplex unit out of the machine.

1	duplex unit

2 Remove the jammed paper from the duplex unit.
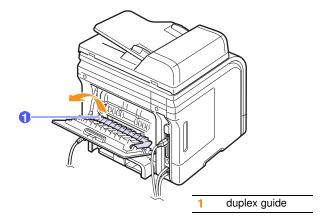
If the paper does not come out with the duplex unit, remove the paper from the bottom of the machine.

Duplex Jam 1
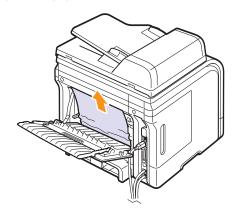
1 Open the rear cover.

2 Unfold the duplex guide fully.

| 1 | duplex guide |
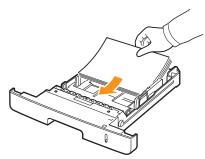
3 Pull the jammed paper out.

Tips for avoiding paper jams

By selecting the correct media types, most paper jams can be avoided. When a paper jam occurs, follow the steps outlined on page 14.2.

- Follow the procedures on page 5.5. Ensure that the adjustable guides are positioned correctly.
- Do not overload the tray. Ensure that the paper level is below the paper capacity mark on the inside wall of the tray.
- Do not remove paper from the tray while your machine is printing.
- Flex, fan, and straighten paper before loading.
- Do not use creased, damp, or highly curled paper.
- Do not mix paper types in a tray.
- Use only recommended print media. See page 5.8.
- Ensure that the recommended print side of print media is facing down in the tray, or facing up in the multi-purpose tray.
- If paper jams occur frequently when you print on A5-sized paper:

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

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

Understanding display messages

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

Note

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

Message	Meaning	Suggested solutions
Authentication Failure	The ID or password you entered is incorrect.	Enter the correct ID or password.
Cancel? ◄ **Yes** ►	Your machine's memory has become full while trying to store an original into memory.	To cancel the fax job, press the **OK** button to accept **Yes**. If you want to send those pages that have been successfully stored, press the **OK** button to accept **No**. You should send the remaining pages later, when memory is available.
[COMM. Error]	The machine has a communication problem.	Ask the sender to try again.
Connection Error	Connection with the SMTP server failed.	Check the server settings and the network cable.
Connection Failed	The protocol you have entered is not supported or server port is wrong.	Check the protocol or server port.
Data Read Fail **Check USB Mem.**	Time expired while reading data.	Try again.
Data Write Fail **Check USB Mem.**	Storing to the USB memory failed.	Check the available USB memory space.
Document Jam	The loaded original has jammed in the ADF.	Clear the jam. See page 14.1.
Door Open	The front cover or rear cover is not securely latched.	Close the cover until it locks into place.

Message	Meaning	Suggested solutions
Duplex Jam 0 Check Inside	Paper has jammed during duplex printing.	Clear the jam. See page 14.5.
Duplex Jam 1 Open/Close Door	Paper has jammed during duplex printing.	Clear the jam. See page 14.6.
Enter Again	You entered an unavailable item.	Enter the correct item again.
File Access Denied	Login to the network server was successful. However, access to the file on the network server was denied.	Change the server settings.
File Name Exist	The file name you have entered already exists.	Enter a different file name.
File Name Over Limit	The file names you can use are from doc001 to doc999. However, all file names are used already.	Delete unnecessary files.
File Format Not Supported	The selected file format is not supported.	Use the correct file format.
Fuser Door Open	The fuser door is not securely latched.	Open the rear cover and close the fuser door until it locks into place. For the location of the fuser door, see page 14.5.
Group Not Available	You have tried to select a group location number where only a single location number can be used, such as when adding locations for a Multiple Send operation.	Use a speed dial number or dial a number manually using the number keypad.
[Incompatible]	The machine has received a fax from which is registered as a junk fax..	The received fax data will be deleted. Reconfirm junk fax setup, see page 10.2.

Message	Meaning	Suggested solutions
Invalid Server Address	The server address you have entered is invalid.	Enter the correct server address.
Line Busy	The receiving fax machine did not answer or the line is already engaged.	Try again after a few minutes.
[Line Error]	Your machine cannot connect with the receiving fax machine or has lost contact because of a problem with the phone line.	Try again. If the problem persists, wait an hour or so for the line to clear and try again. Or, turn the ECM mode on. See page 10.1.
Low Heat Error Cycle Power	There is a problem in the fuser unit.	Unplug the power cord and plug it back in. If the problem persists, please call for service.
LSU Motor Error Cycle Power	A problem has occurred in the LSU (Laser Scanning Unit).	Unplug the power cord and plug it back inches. If the problem persists, please call for service.
LSU Hsync Error Cycle Power	A problem has occurred in the LSU (Laser Scanning Unit).	Unplug the power cord and plug it back inches. If the problem persists, please call for service.
Main Motor Locked	There is a problem in the main motor.	Open and then close the front cover.
Mail Exceeds Server Support	The mail size is larger than the supported size by SMTP server.	Divide your mail or reduce the resolution.
Memory Full	The memory is full.	Delete unnecessary fax jobs and retransmit after more memory becomes available. Alternatively, split the transmission into more than one operation.
MP Tray Paper Empty	There is no paper in the multi-purpose tray.	Load paper in the multi-purpose tray. See page 5.7.
Network Error	There is a problem with the network.	Contact your network administrator.

Message	Meaning	Suggested solutions
[No Answer]	The receiving fax machine has not answered after several redial attempts.	Try again. Make sure that the receiving machine is operational.
Not Assigned	The speed button or speed dial number you tried to use has no number or email address assigned to it.	Enter the number or email address manually using the number keypad or store the number or address.
[No Paper] Add Paper	The paper in the tray has run out.	Load paper in the tray. See page 5.5.
One Page is Too Large	Single page data exceeds the configured mail size.	Reduce the resolution and try again.
Open Heat Error Cycle Power	There is a problem in the fuser unit.	Unplug the power cord and plug it back in. If the problem persists, please call for service.
Operation Not Assigned	You are in the **Add Page**/**Cancel Job** operation, but there are no jobs stored.	Check the display to see if there are any scheduled jobs.
Over Heat Error Cycle Power	There is a problem in the fuser unit.	Unplug the power cord and plug it back in. If the problem persists, please call for service.
Paper Jam 0 Open/Close Door	Paper has jammed in the feeding area of the tray.	Clear the jam. See page 14.2 and page 14.3.
Paper Jam 1 Open/Close Door	Paper has jammed in the fuser area.	Clear the jam. See page 14.3.
Paper Jam 2 Check Inside	Paper has jammed in the paper exit area.	Clear the jam. See page 14.4.
Power Failure	Power has turned off then on and the machine's memory has not been back up.	The job which you were trying to do before the power failure must be completely re-done.

Message	Meaning	Suggested solutions
Retry Redial?	The machine is waiting for a specified time interval to redial a previously busy station.	You can press **OK** to immediately redial, or **Stop**/**Clear** to cancel the redial operation.
Scanner locked	The scanner module is locked	Unlock the scanner and press **Stop**/**Clear**.
Self Diagnostic LSU	The LSU (Laser Scanning Unit) in your printer is checking some problems detected.	Please wait a few minutes.
Self Diagnostic Temperature	The engine in your machine is checking some problems detected.	Please wait a few minutes.
Send Error (AUTH)	There is a problem in SMTP authentication.	Configure the authentication setting.
Send Error (DNS)	There is a problem in DNS.	Configure the DNS setting.
Send Error (POP3)	There is a problem in POP3.	Configure the POP3 setting.
Send Error (SMTP)	There is a problem in SMTP.	Change to the available server.
Send Error (Wrong Config)	There is a problem on the network interface card.	Configure your network interface card correctly.
[Stop Pressed]	**Stop**/**Clear** has been pressed during a fax transmission.	Try again.
Tray 1 Paper Empty	There is no paper in the tray 1.	Load paper in the tray 1. See page 5.5.
Tray 2 Paper Empty	There is no paper in the optional tray 2.	Load paper in the optional tray 2. See page 5.5.

Message	Meaning	Suggested solutions
Install Toner	A toner cartridge is not installed.	Install a toner cartridge.
Invalid Toner	The toner cartridge you have installed is not for your printer.	Install a genuine toner cartridge, designed for your printer.
Toner Low	The toner cartridge is almost empty.	Take out the toner cartridge and thoroughly shake it. By doing this, you can temporarily reestablish printing operations.
NonGenuine Toner ◄ **Stop** ►	The toner cartridge installed is not a genuine cartridge.	You can select either **Stop** or **Continue**. If you do not select any, the printer will work as **Stop** is selected. If you select **Stop**, you cannot print until the genuine cartridge is installed. However, you can still print any kind of reports. If you select **Continue**, you can keep printing but the quality cannot be guaranteed, and the product support is no longer provided. If you want to change the selection, turn the printer off and on to have this message appear again, and then re-select **Stop** or **Continue**.
NonGenuine Toner **Replace Toner1**	The toner cartridge installed is not a genuine cartridge.	This message appears when you selected **Stop** at the **NonGenuine Toner** prompt. Install the genuine toner cartridge.
NonGenuine Toner **Replace Toner**	The toner cartridge installed is not a genuine cartridge.	This message appears when you selected **Continue** at the **NonGenuine Toner** prompt. Install the genuine toner cartridge.
Toner Empty **Replace Toner**	The toner in the cartridge has run out.	Install a new genuine toner cartridge. You can keep printing but the quality cannot be guaranteed, and the product support is no longer provided. You can configure not to see the **Toner Empty Replace Toner** message. See page 13.6.
Replace Toner	The toner in the cartridge has run out.	This message appears when you turned off the **Toner Empty Replace Toner** message. See page 13.6. Install a new genuine toner cartridge. You can keep printing but the quality cannot be guaranteed, and the product support is no longer provided.
Toner Exhausted ◄ **Stop** ►	The lifespan of the toner cartridge is reached.	You can select either **Stop** or **Continue**. If you do not select any, the printer will work as **Stop** is selected. If you select **Stop**, you cannot print until the genuine cartridge is installed. If you select **Continue**, you can keep printing but the quality cannot be guaranteed, and the product support is no longer provided. If you want to change the selection, turn the printer off and on to have this message appear again, and then re-select **Stop** or **Continue**.
Toner Exhausted **Replace Toner1**	The lifespan of the toner cartridge is reached.	This message appears when you selected **Stop** at the **Toner Exhausted** prompt. Install the genuine toner cartridge.
Toner Exhausted **Replace Toner**	The lifespan of the toner cartridge is reached.	This message appears when you selected **Continue** at the **Toner Exhausted** prompt. Install the genuine toner cartridge.

Solving other problems

The following chart lists some conditions that may occur and the recommended solutions. Follow the suggested solutions until the problem is corrected. If the problem persists, please call for service.

Paper feeding problems

Condition	Suggested solutions
Paper is jammed during printing.	Clear the paper jam. See page 14.2.
Paper sticks together.	• Ensure that there is not too much paper in the tray. The tray can hold up to 250 sheets of paper, depending on the thickness of your paper. • Make sure that you are using the correct type of paper. See page 5.8. • 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. • If multiple sheets have caused a paper jam, clear the paper jam. See page 14.2.
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. See page 5.8. • If an original does not feed into the machine, the ADF rubber pad may require to be replaced. Contact your service representative.
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 multi-purpose tray. • An incorrect type of paper is being used. Use only paper that meets the specifications required by the machine. See page 5.8. • There may be debris inside the machine. Open the front cover and remove the debris. • If an original does not feed into the machine, the ADF rubber pad may require to be replaced. Contact your service representative.
Transparencies stick together in the paper exit.	Use only transparencies specifically designed for laser printers. Remove each transparency as it exits from the machine.
Envelopes skew or fail to feed correctly.	Ensure that the paper guides are against both sides of the envelopes.

Printing problems

Condition	Possible cause	Suggested solutions
The machine does not print.	The machine is not receiving power.	Check the power cord connections. Check the power switch and the power source.
	The machine is not selected as the default printer.	Select **Printer Driver Type 104 PCL 6** as your default printer in your Windows.
	Check the machine for the following: • The front cover is not closed. Close the cover. • Paper is jammed. Clear the paper jam. See page 14.2. • No paper is loaded. Load paper. See page 5.5. • The toner cartridge is not installed. Install the toner cartridge. If a system error occurs, contact your service representative.	
	The connection cable between the computer and the machine is not connected properly.	Disconnect the printer cable and reconnect it.
	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 printer cable.
	The port setting is incorrect.	Check the Windows printer setting to make sure that the print job is sent to the correct port. If the computer has more than one port, make sure that the machine is attached to the correct one.
	The machine may be configured incorrectly.	Check the printer properties to ensure that all of the print settings are correct.
	The printer driver may be incorrectly installed.	Repair the printer software. See the **Software section**.
	The machine is malfunctioning.	Check the display message on the control panel to see if the machine is indicating a system error.

Condition	Possible cause	Suggested solutions
The machine selects print materials from the wrong paper source.	The paper source selection in the printer properties may be incorrect.	For many software applications, the paper source selection is found under the **Paper** tab within the printer properties. Select the correct paper source. See the printer driver help screen.
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.
	If you are using Windows 98/Me, the Spool Setting may be set incorrectly.	From the **Start** menu, choose **Settings** and then **Printers**. Right-click the **Printer Driver Type 104 PCL 6** machine icon, choose **Properties**, click the **Details** tab, and then choose the **Spool Settings** button. Select the desired spool setting.
Half the page is blank.	The page orientation setting may be incorrect.	Change the page orientation in your application. See the printer driver help screen.
	The paper size and the paper size settings do not match.	Ensure that the paper size in the printer driver settings matches the paper in the tray. Or, ensure that the paper size in the printer driver settings matches the paper selection in the software application settings you use.
The machine prints, but the text is wrong, garbled, or incomplete.	The printer cable is loose or defective.	Disconnect the printer cable and reconnect. Try a print job that you have already printed successfully. If possible, attach the cable and the machine to another computer and try a print job that you know works. Finally, try a new printer cable.
	The wrong printer driver was selected.	Check the application's printer selection menu to ensure that your 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 then back on again.

Condition	Possible cause	Suggested solutions
Pages print, but are blank.	The toner cartridge is defective or out of toner.	Redistribute the toner, if necessary. See page 13.4. If necessary, replace the toner cartridge.
	The file may have blank pages.	Check the file to ensure that it does not contain blank pages.
	Some parts, such as the controller or the board, may be defective.	Contact a service representative.
The illustrations print incorrectly in Adobe Illustrator.	The setting in the software application is wrong.	Select **Download as Bit Image** in the **TrueType Options** window of the graphic properties and print the document again.
The printer does not print PDF file 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 solve this problem. Turn on **Print As Image** from the Acrobat printing options. **Note:** It will take longer to print when you print a PDF file as an image.

Printing quality problems

If the inside of the machine is dirty or paper has been loaded improperly, you may notice a reduction in print quality. See the table below to clear the problem.

Condition	Suggested solutions
Light or faded print AaBbCc AaBbCc AaBbCc AaBbCc AaBbCc	If a vertical white streak or faded area appears on the page: • The toner supply is low. You may be able to temporarily extend the toner cartridge life. See page 13.4. If this does not improve the print quality, install a new toner cartridge. • The paper may not meet paper specifications; for example, the paper is too moist or too rough. See page 5.8. • 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 and page 2.4, respectively. • A combination of faded or smeared defects may indicate that the toner cartridge needs cleaning. See page 13.5. • The surface of the LSU part inside the machine may be dirty. Clean the LSU. See page 13.2.
Toner specks AaBbCc AaBbCc AaBbCc AaBbCc AaBbCc	• The paper may not meet specifications; for example, the paper is too moist or too rough. See page 5.8. • The transfer roller may be dirty. Clean the inside of your machine. See page 13.2. • The paper path may need cleaning. See page 13.2.
Dropouts AaBbCc AaBbCc AaBbCc AaBbCc AaBbCc	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. See page 5.8. • The paper lot is bad. The manufacturing processes can cause some areas to reject toner. Try a different kind or brand of paper. • If these steps do not correct the problem, contact a service representative.

Condition	Suggested solutions
Vertical lines AaBbCc AaBbCc AaBbCc AaBbCc AaBbCc	If black vertical streaks appear on the page: • The drum inside the toner cartridge has probably been scratched. Remove the toner cartridge and install a new one. See page 13.5. If white vertical streaks appear on the page: • The surface of the LSU part inside the machine may be dirty. Clean the LSU. See page 13.2.
Gray background AaBbCc AaBbCc AaBbCc AaBbCc AaBbCc	If the amount of background shading becomes unacceptable: • Change to a lighter weight paper. See page 5.8. • Check the machine's environment: very dry (low humidity) or high humidity (higher than 80% RH) conditions can increase the amount of background shading. • Remove the old toner cartridge and install a new one. See page 13.5.
Toner smear AaBbCc AaBbCc AaBbCc AaBbCc AaBbCc	• Clean the inside of the machine. See page 13.2. • Check the paper type and quality. See page 5.8. • Remove the toner cartridge and install a new one. See page 13.5.
Vertical repetitive defects AaBbCc AaBbCc AaBbCc AaBbCc AaBbCc	If marks repeatedly appear on the printed side of the page at even intervals: • The toner cartridge may be damaged. If a repetitive mark occurs on the page, print a cleaning sheet several times to clean the cartridge; see page 13.5. After the printout, if you still have the same problems, remove the toner cartridge and install a new one. See page 13.5. • 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.

Condition	Suggested solutions
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. • If background scatter covers the entire surface area of a printed page, adjust the print resolution through your software application or the printer properties.
Misformed characters	• If characters are improperly formed and producing hollow images, the paper stock may be too slick. Try a different paper. See page 5.8. • If characters are improperly formed and producing a wavy effect, the scanner unit may need service. For service, contact a service representative.
Page skew	• Ensure that the paper is loaded properly. • Check the paper type and quality. See page 5.8. • Ensure that the paper or other material is loaded correctly and the guides are not too tight or too loose against the paper stack.
Curl or wave	• Ensure that the paper is loaded properly. • Check the paper type and quality. Both high temperature and humidity can cause paper curl. See page 5.8. • Turn over the stack of paper in the tray. Also try rotating the paper 180° in the tray. • Try printing to the rear cover.

Condition	Suggested solutions
Wrinkles or creases	• Ensure that the paper is loaded properly. • Check the paper type and quality. See page 5.8. • Turn over the stack of paper in the tray. Also try rotating the paper 180° in the tray. • Try printing to the rear cover.
Back of printouts are dirty	Check for leaking toner. Clean the inside of the machine. See page 13.2.
Black pages	• The toner cartridge may not be installed properly. Remove the cartridge and reinsert it. • The toner cartridge may be defective and need replacing. Remove the toner cartridge and install a new one. See page 13.5. • The machine may require repair. Contact a service representative.
Loose toner	• Clean the inside of the machine. See page 13.2. • Check the paper type and quality. See page 5.8. • Remove the toner cartridge and install a new one. See page 13.5. • 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: • If you are using transparencies, try another type of transparency. Because of the composition of transparencies, some character voids are normal. • 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. See page 5.8.

Condition	Suggested solutions
Horizontal stripes AaBbCc AaBbCc AaBbCc AaBbCc AaBbCc	If horizontally aligned black streaks or smears appear: • The toner cartridge may be installed improperly. Remove the cartridge and reinsert it. • The toner cartridge may be defective. Remove the toner cartridge and install a new one. See page 13.5. • If the problem persists, the machine may require repair. Contact a service representative.
Curl AaBbCc AaBbCc AaBbCc	If the printed paper is curled or paper does not feed into the machine: • Turn over the stack of paper in the tray. Also try rotating the paper 180° in the tray. • Try printing to the rear cover.
An unknown image repetitively appears on a next few sheets or loose toner, light print, or contamination occurs.	Your printer is probably being used at an altitude of 2,500 m (8,200 ft) or above. The high altitude may affect the print quality such as loose toner or light imaging. You can set this option through **Printer Settings Utility** or **Printer** tab in printer driver's properties. Refer to the **Software section** for details.

Copying problems

Condition	Suggested solutions
Copies are too light or too dark.	Use **Darkness** to darken or lighten the background of the copies.
Smears, lines, marks, or spots appears on copies.	• If defects are on the original, press **Darkness** to lighten the background of your copies. • If no defects are on the original, clean the scan unit. See page 13.3.
Copy image is skewed.	• Ensure that the original is face down on the scanner glass or face up in the ADF. • Check that the copy paper is loaded correctly.
Blank copies print out.	Ensure that the original is face down on the scanner glass or face up in the ADF.
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 stack of 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 paper weight. 75 g/m^2 bond paper is recommended. • 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 machine may be turned on and off frequently. • The scanner lid may be left open while copies are being made.

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 ADF. • 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 USB or parallel cable is connected properly. • Make sure that the USB or parallel cable is not defective. Switch the cable with a known good cable. If necessary, replace the cable. • If you are using a parallel cable, ensure that it is compliant with IEEE 1284 standards. • Check that the scanner is configured correctly. Check scan setting in the **SmarThru Configuration** or the application you want to use to make certain that the scanner job is being sent to the correct port.
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.

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. When that job is complete, try your job again. • The Selected port is currently being used. Restart your computer and try again. • The printer cable may be improperly connected or the power may be off. You must use a parallel cable that supports IEEE 1284 bi-directional communications. • 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. • Do not use parallel and USB cables at the same time.

ScanClair problems

Condition	Suggested solutions
I cannot find a scanned image file.	You can check the scanned file's destination in the **Advanced** page in the **ScanClair** program's Properties screen.
I cannot find the scanned image file after scanning.	• Check if the scanned file's application is on your computer. • Check **Send image immediately to the specified folder using an associated default application** in the **Advanced** page in the **ScanClair** program's Properties screen to open the scanned image immediately after scanning.
I forgot my ID and PIN.	Check your ID and PIN in the **Server** page in the **ScanClair** program's Properties screen.
I cannot view the Help file.	To view the Help file, you need to have Internet Explorer 4 service pack 2 or above.
I cannot use the **ScanClair**.	Check your operating system. Supporting operating systems are Windows 98/Me/NT 4.0/2000/XP/2003.

Fax problems

Condition	Suggested solutions
The machine is not working, there is no display and the buttons are not working.	• Unplug the power cord and plug it in again. • Ensure that there is power to the electrical outlet.
No dial tone sounds.	• Check that the phone line is connected properly. • Check that the phone socket in 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. Print a **Phone Book** list, referring to page 10.5.
The original does not feed into the machine.	• Make sure that the paper is not wrinkled and you are putting it in correctly. Check that the original is the right size, not too thick or thin • Make sure that the ADF is firmly closed. • The ADF rubber pad may need to be replaced. Contact your service representative.

Condition	Suggested solutions
Faxes are not received automatically.	• The receiving mode should be set to **Fax**. • Make sure that there is paper in the tray. • 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 ADF or on the scanner glass. • **Sending** should show up on the display. • 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. • The toner cartridge may be empty. Replace the toner cartridge, referring to page 13.5.
Some of the words on an incoming fax are stretched.	The fax machine sending you the fax had a temporary document jam.
There are lines on the originals you send.	Check your scan unit for marks and clean it. See page 13.3.
The machine dials a number, but a 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 her/him to sort out the problem.
Faxes do not store in memory.	There may not be enough memory space to store the fax. If the display shows the **Memory Full** message, delete from memory any faxes you no longer need and then try again to store the fax.
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. For details about paper settings, see page 5.8.
Message confirmation report shows: **No Dial Tone** and a transmission is not successful.	Turn off **DT Detection** (Dial Tone Detection) feature of your machine. See page 10.2.

Common Windows problems

Condition	Suggested solutions
"File in Use" message appears during installation.	Exit all software applications. Remove all software from the StartUp Group, then restart Windows. Reinstall the printer driver.
"Error Writing to LPTx" message appears.	• Ensure that the cables are connected correctly, the machine is on. • If bi-directional communication is not turned on in the driver, it will also cause this message.
"General Protection Fault", "Exception OE", "Spool32", or "Illegal Operation" messages appear.	Close all other applications, reboot Windows and try printing again.
"Fail To Print", "A printer timeout error occurred." messages appear.	These messages may appear during printing. Just keep waiting until the machine finishes printing. If the message appears in standby mode or after printing has been completed, check the connection and/or whether an error has occurred.

Note

Refer to Microsoft Windows 98/Me/NT 4.0/2000/XP User's Guide that came with your PC for further information on Windows error messages.

Common PostScript problems

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

Note

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

Problem	Possible Cause	Solution
PostScript file cannot be printed.	The PostScript driver may not be installed correctly.	• Install the PostScript driver, referring to the **Software section**. • Print a configuration page and verify that the PS version is available for printing. • If the problem persists, contact a service representative.

Problem	Possible Cause	Solution
"Limit Check Error" message appears.	The print job was too complex.	You might need to reduce the complexity of the page or install more memory.
A PostScript error page prints.	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 2 is not selected in the driver.	The printer driver has not been configured to recognize the optional tray 2.	Open the PostScript driver properties, select the **Device Settings** tab, and set the **Tray2** option of the **Installable Options** section to **Installed**.
When print a document in Macintosh with Acrobat Reader 6.0 or higher, colors print incorrectly.	The resolution setting in the printer driver may not be matched with that in Acrobat Reader.	Make sure that the resolution setting in your printer driver matches that in Acrobat Reader.

Common Macintosh problems

Problem	Suggested solutions
The printer does not print PDF file 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 solve this problem. Turn on **Print As Image** from the Acrobat printing options. **Note:** It will take longer to print when you print a PDF file as an image.
The document has printed, but the print job has not disappeared from the spooler in Mac OS 10.3.2.	Update your Mac OS to OS 10.3.3. or higher.

15 Installing accessories

Your machine is a full-featured one that has been optimized to meet most of your printing needs. Recognizing that each user may have different requirements, however, we make several accessories available to enhance your machine's capabilities.

This chapter includes:

- **Precautions when installing accessories**
- **Installing a memory DIMM**

Precautions when installing accessories

Disconnect the power cord

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

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

Discharge static electricity

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

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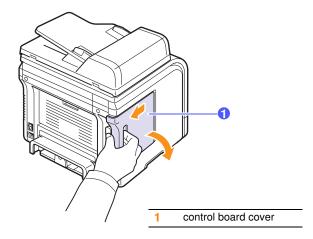
Your machine has a dual in-line memory module (DIMM) slot. Use this DIMM slot to install additional memory.

Your machine has 96 MB of memory. It can be expanded to 320 MB. However, you must remove the preinstalled memory DIMM before upgrading the memory.
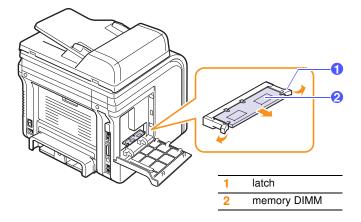
For order information for optional memory DIMMs, see page 12.1.

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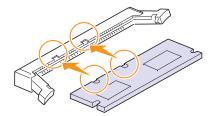
2 Grasp the control board cover and slide toward you to open it.

1	control board cover

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

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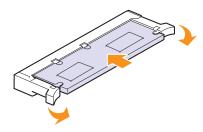
4 Take out a new memory DIMM from the plastic bag.

5 Holding the memory DIMM by the edges, align the notches on the memory DIMM with the grooves on the memory DIMM slot.
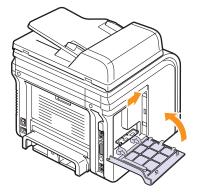
![Note icon] **Note**
The notches and grooves illustrated above may not match those on an actual DIMM and the slot.

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

7 Replace the control board cover.

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

Activating the added memory in the PS printer properties

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

1 Make sure that the PostScript printer driver is installed on your computer. For details about installing the PS printer driver, see the **Software section**.

2 Click the Windows **Start** menu.

3 For Windows 98/Me/NT 4.0/2000, select **Settings** and then **Printers**.

For Windows XP, select **Printers and Faxes**.

4 Select the **Printer Driver Type 104 PS** printer.

5 Click the right mouse button on the machine icon and select **Properties**.

6 For Windows 98/Me, select **Device Options**.

For Windows NT 4.0/2000/XP, select **Device Settings**.

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

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

8 Click **OK**.

16 Specifications

This chapter includes:

- **General specifications**
- **Scanner and copier specifications**
- **Printer specifications**
- **Facsimile specifications**

General specifications

Item	Description
ADF	Up to 50 sheets (75 g/m^2)
ADF document size	Width: 142 to 216 mm Length: 148 to 356 mm
Paper input capacity	Tray 1/2: 250 multi-pages for plain paper (75 g/m^2) Multi-purpose tray: 50 pages for plain paper, 5 pages for card stock, labels, transparencies, and envelopes (60 to 163 g/m^2)
Paper output capacity	Output tray: 150 sheets (face down) Rear cover: 1 sheet (face up)
Consumables	1-piece toner cartridge system
Power rating	110 - 127 VAC, 50/60 Hz, 6.4 A 220 - 240 VAC, 50/60 Hz, 3.2 A
Power consumption	Average: Less than 520 W Power save mode: Less than 20 W
Noise level[a]	Standby mode: Less than 39 dBA Printing: Less than 54 dBA Copying mode: Less than 55 dBA Warm up: Less than 49 dBA
Warm-up time	Less than 20 seconds (from sleep mode)
Operating environment	Temperature: 10 °C to 32 °C Humidity: 20% to 80% RH
Display	16 characters x 2 lines
Toner cartridge yield[b]	8,000 pages (for starter, 4,000 pages)
Memory	96 MB (max. 320 MB)
External dimension (W x D x H)	466 x 435.4 x 458 mm (18.3 x 17.1 x 18 in)

Item	Description
Weight (including consumables)	18.9 Kg (41.6 lb)
Package weight	Paper: 2.8 Kg (6.17 lb) Plastic: 0.7 Kg (1.54 lb)
Duty cycle	Monthly print: Up to 25,000 pages

a. Sound Pressure Level, ISO 7779
b. Average cartridge yield declared in accordance with ISO/ IEC 19752. The number of pages may be affected by operating environment, printing interval, media type, and media size.

Printer specifications

Item	Description
Printing method	Laser Beam Printing
Printing speed[a]	Up to 28 ppm in A4 (30 ppm in Letter)
Duplex printing speed	Up to 19 ipm in A4 (21 ipm in Letter)
First print out time	8.5 seconds (from ready)
Print resolution	Up to 1,200 x 1,200 dpi effective output
Printer language	PCL 6, PS 3
OS Compatibility	Windows 98/Me/NT 4.0/2000/XP/2003 Macintosh 10.3 ~ 10.4
Interface	IEEE 1284 Parallel High Speed USB 2.0 Ethernet 10/100 Base TX (Embedded type)

a. Print speed will be affected by operating system used, computing performance, application software, connecting method, media type, media size, and job complexity.

Scanner and copier specifications

Item	Description
Compatibility	TWAIN standard / WIA standard
Scanning method	ADF and Flat-bed Color CCD (Charge Coupled Device) module
Resolution	Optical: 600 x 1,200 dpi (mono and color) Enhanced: 4,800 x 4,800 dpi
Effective scanning length	Scanner glass: 297 mm ADF: 356 mm
Effective scanning width	Max 208 mm
Color bit depth	24 bit
Mono bit depth	1 bit for Black & White mode 8 bit for Gray mode
Copy speed[a]	Up to 28 ppm in A4 (30 ppm in Letter)

Copy resolution	Scan: up to 600 x 300 (text, text/photo)
	     up to 600 x 600 (photo using platen)
	     up to 600 x 300 (photo using ADF)
	Print: up to 600 x 600 (text, text/photo, photo)

Zoom rate	Scanner glass: 25 to 400% ADF: 25 to 100%
Multiple copies	1 to 99 pages
Grayscale	256 levels

a. Copy Speed is based on Single Document Multiple Copy.

Facsimile specifications

Item	Description
Compatibility	ITU-T Group 3
Applicable line	Public Switched Telephone Network (PSTN) or behind PABX
Data coding	MH/MR/MMR/JBIG/JPEG Color fax transmission: JPEG
Modem speed	33.6 Kbps
Transmission speed	Approx. 3 seconds/page[a]
Maximum document length	Scanner glass: 297 mm Automatic document glass: 356 mm
Resolution	Standard: 203 x 98 dpi Fine: 203 x 196 dpi Super Fine: 300 x 300 dpi Photo: 203 x 196 dpi Color: 200 x 200 dpi
Memory	6 MB
Halftone	256 levels
Auto dialer	Speed dialing (up to 240 numbers)

a. Transmission time applies to memory transmission of text data with ECM compression using only ITU-T No.1 Chart.

INDEX

Software section

SOFTWARE SECTION
CONTENTS

Chapter 4: USING WINDOWS POSTSCRIPT DRIVER

Chapter 5: SHARING THE PRINTER LOCALLY

Chapter 6: USING UTILITY APPLICATIONS

Chapter 7: SCANNING

Chapter 8: USING YOUR PRINTER WITH A MACINTOSH

1 Installing Printer Software in Windows

This chapter includes:

- **Installing Printer Software**
- **Reinstalling Printer Software**
- **Removing Printer Software**

Installing Printer Software

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

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

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

Installing Software for Local Printing

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

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

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

Typical Installation

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

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

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

The CD-ROM should automatically run, and an installation window appears.
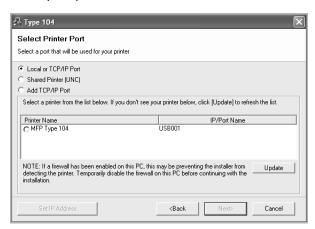
If the installation window does not appear, click **Start** and then **Run**. Type **X:\Setup.exe**, replacing "**X**" with the letter which represents your drive and click **OK**.

3 Click **Next**.

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

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

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

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

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

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

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

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

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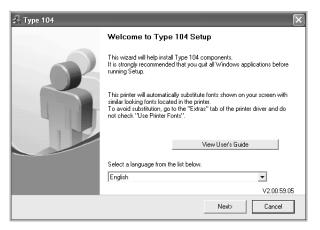
NOTE: After setup is complete, if your printer driver doesn't work properly, reinstall the printer driver. See "Reinstalling Printer Software" on page 10.

Custom Installation
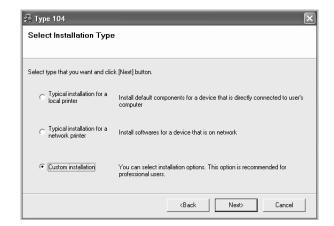
You can choose individual components to install.

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

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

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

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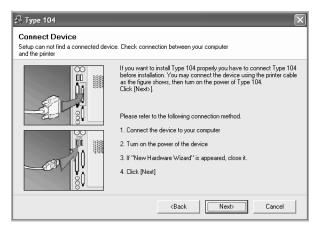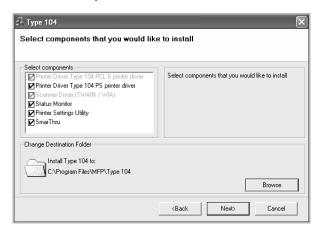

3 Click **Next**.

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

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

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

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

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

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

NOTE: You can change the desired installation folder by clicking [**Browse**].

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

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

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

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

9 Click **Finish**.

Installing Software for Network Printing

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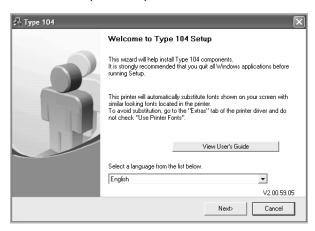
You can install the printer software using the typical or custom method.

Typical Installation

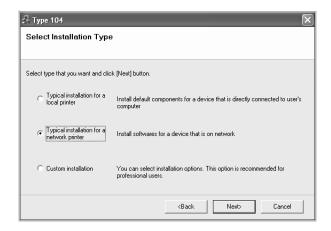This is recommended for most users. All components necessary for printer operations will be installed.

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

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

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

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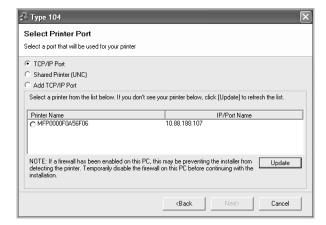

3 Click **Next**.

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

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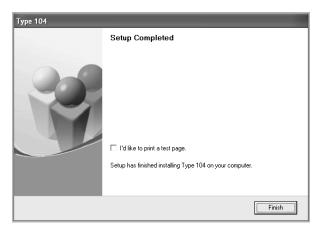

5 The list of printers available on the network appears. Select the printer you want to install from the list and then click **Next**.

- If you do not see your printer on the list, click **Update** to refresh the list, or select **Add TCP/IP Port** to add your printer to the network. To add the printer to the network, enter the port name and the IP address for the printer.

- To find a shared network printer (UNC Path), select **Shared Printer [UNC]** and enter the shared name manually or find a shared printer by clicking the **Browse** button.

6 After the installation is finished, a window appears asking you to print a test page. If you so desire, select the checkbox and click **Finish**.

Otherwise, just click **Finish**.

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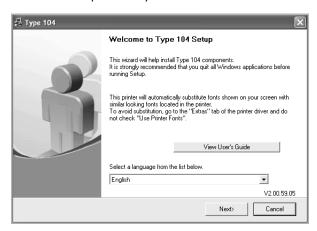
Custom Installation

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

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

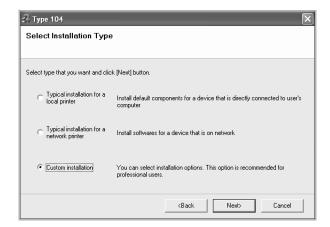**2** Insert the supplied CD-ROM into your CD-ROM drive.

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

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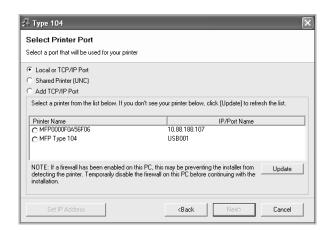

3 Click **Next**.
   • If necessary, select a language from the drop-down list.

• **View User's Guide**: Allows you to view the User's Guide. If your computer doesn't have Adobe Acrobat, click on this option and it will automatically install Adobe Acrobat Reader for you.

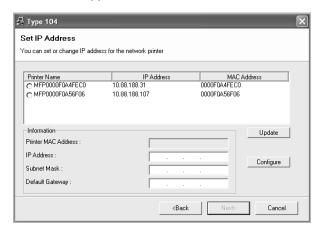**4** Select **Custom installation**. Click **Next**.

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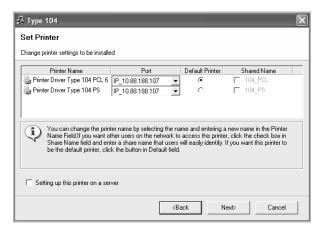

• If you do not see your printer on the list, click **Update** to refresh the list, or select **Add TCP/IP Port** to add your printer to the network. To add the printer to the network, enter the port name and the IP address for the printer.

• To find a shared network printer (UNC Path), select **Shared Printer [UNC]** and enter the shared name manually or find a shared printer by clicking the **Browse** button.

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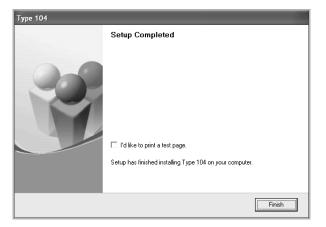

a. Select a printer to be set with a specific IP address from the list.
b. Configure an IP address, subnet mask, and gateway for the printer manually and click **Configure** to set the specific IP address for the network printer.
c. Click **Next**.

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

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

7 After the installation is finished, a window appears asking you to print a test page. If you so desire, select the checkbox and click **Finish**.
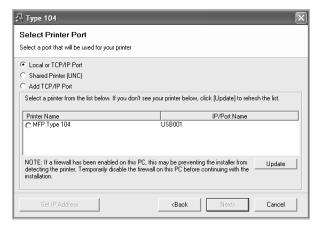
Otherwise, just click **Finish**.

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

Reinstalling Printer Software

You can reinstall the software if installation fails.

1 Start Windows.

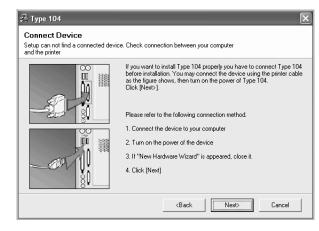**2** From the **Start** menu select **Programs** or **All Programs** → **Type 104** → **Maintenance**.

3 Select **Repair** and click **Next**.

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

- If you do not see your printer on the list, click **Update** to refresh the list, or select **Add TCP/IP Port** to add your printer to the network. To add the printer to the network, enter the port name and the IP address for the printer.

- To find a shared network printer (UNC Path), select **Shared Printer [UNC]** and enter the shared name manually or find a shared printer by clicking the **Browse** button.

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

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

- After connecting the printer, click **Next**.

- If you don't want to connect the printer at this time, click **Next**, and **No** on the following screen. Then the installation will start and a test page will not be printed at the end of the installation.

- *The reinstallation window that appears in this User's Guide may differ depending on the printer and interface in use.*

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

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

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

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

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

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

Removing Printer Software

1 Start Windows.

2 From the **Start** menu select **Programs** or **All Programs**
→ **Type 104** → **Maintenance**.

3 Select **Remove** and click **Next**.

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

4 Select the components you want to remove and then click
Next.

5 When your computer asks you to confirm your selection,
click **Yes**.

The selected driver and all of its components are removed
from your computer.

6 After the software is removed, click **Finish**.

2 Basic Printing

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

This chapter includes:

- **Printing a Document**
- **Printing to a file (PRN)**
- **Printer Settings**
  - **Layout Tab**
  - **Paper Tab**
  - **Graphics Tab**
  - **Extras Tab**
  - **About Tab**
  - **Printer Tab**
  - **Using a Favorite Setting**
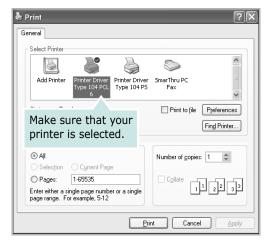 - **Using Help**

Printing a Document

NOTES:

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

The following procedure describes the general steps required for printing from various Windows applications. The exact steps for printing a document may vary depending on the application program you are using. Refer to the User's Guide of your software application for the exact printing procedure.

1 Open the document you want to print.

2 Select **Print** from the **File** menu. The Print window is displayed. It may look slightly different depending on your application.

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

Make sure that your printer is selected.

3 Select **your printer driver** from the **Name** drop-down list.

To take advantage of the printer features provided by your printer driver, click **Properties** or **Preferences** in the application's Print window. For details, see "Printer Settings" on page 13.

If you see **Setup**, **Printer**, or **Options** in your Print window, click it instead. Then click **Properties** on the next screen.

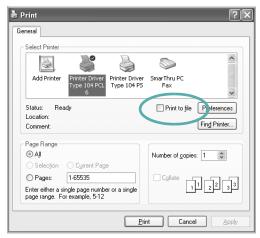Click **OK** to close the printer properties window.

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

Printing to a file (PRN)

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

To create a file:

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

2 Select the folder and assign a name of the file and then click OK.

Printer Settings

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

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

Your printer driver **Properties** window that appears in this User's Guide may differ depending on the printer in use.
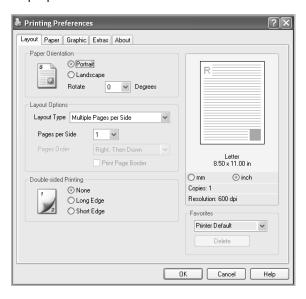
If you access printer properties through the Printers folder, you can view additional Windows-based tabs (refer to your Windows User's Guide) and the Printer tab (see "Printer Tab" on page 17).

NOTES:

- Most Windows applications will override settings you specify in the printer driver. Change all print settings available in the software application first, and change any remaining settings using the printer driver.
- The settings you change remain in effect only while you are using the current program. **To make your changes permanent**, make them in the Printers folder.
- The following procedure is for Windows XP. For other Windows OS, refer to the corresponding Windows User's Guide or online help.

  1. Click the Windows **Start** button.
  2. Select **Printers and Faxes**.
  3. Select **your printer driver icon**.
  4. Right-click on the printer driver icon and select **Printing Preferences**.
  5. Change the settings on each tab, click OK.

Layout Tab

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

Paper Orientation

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

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

▲ Portrait   ▲ Landscape

Layout Options

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

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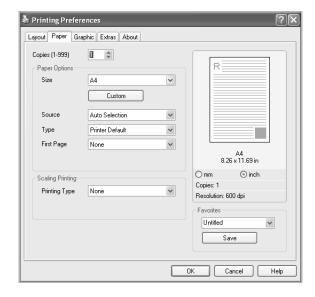
Double-sided Printing

Double-sided Printing allows you to print on both sides of paper.

- For details, see "Printing on Both Sides of Paper" on page 20.

Paper Tab

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

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

Copies

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

Size

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

Source

Make sure that **Source** is set to the corresponding paper tray. Use **Manual Feed** when printing on special materials like envelopes and transparencies. You have to load one sheet at a time into the Manual Tray or Multi-Purpose Tray.

If the paper source is set to **Auto Select**, the printer automatically picks up print material in the following tray order: Manual Tray or Multi-Purpose Tray, Tray1, Optional Tray2

Type

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

First Page

This property allows you to print the first page using a different paper type from the rest of the document. You can select the paper source for the first page.

For example, load thick stock for the first page into the Multi-purpose Tray, and plain paper into Tray1. Then, select **Tray1** in the **Source** option and **Multi-Purpose Tray** in the **First Page** option.
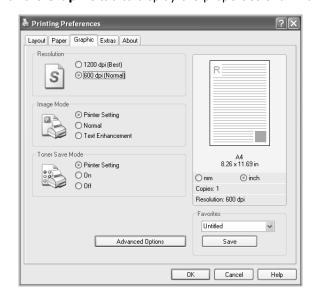
Scaling Printing

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

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

Graphics Tab

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

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

Resolution

The higher the setting, the sharper the clarity of printed characters and graphics. The higher setting also may increase the time it takes to print a document.

Image Mode

The available options are **Normal (1, 2, 3)** and Text Enhance.

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

Toner Save Mode

Selecting this option extends the life of your toner cartridge and reduces your cost per page without a significant reduction in print quality.

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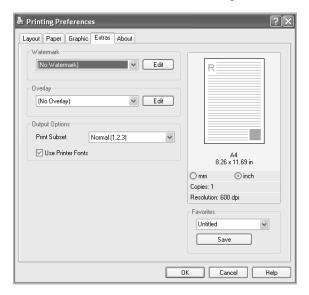
Advanced Options

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

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

Extras Tab

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

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

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

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

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

About Tab

Use the **About** tab to display the copyright notice and the version number of the driver. See "Printing a Document" on page 12 for more information about accessing printer properties.

Printer Tab

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

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

1 Click the Windows **Start** menu.

2 Select **Printers and Faxes**.

3 Select **your printer driver** icon.

4 Right-click on the printer driver icon and select **Properties**.

5 Click the **Printer** tab and set the options.

Using a Favorite Setting

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

To save a **Favorites** item:

1 Change the settings as needed on each tab.

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

3 Click **Save**.

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

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

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

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

Using Help

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

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

3 Advanced Printing

This chapter explains printing options and advanced printing tasks.

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

This chapter includes:

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

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

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

1 To change the print settings from your software application, access printer properties. See "Printing a Document" on page 12.

2 From the **Layout** tab, choose **Multiple Pages per Side** in the **Layout Type** drop-down list.

3 Select the number of pages you want to print per sheet (1, 2, 4, 6, 9, or 16) in the **Pages per Side** drop-down list.

4 Select the page order from the **Page Order** drop-down list, if necessary.

Check **Print Page Border** to print a border around each page on the sheet.

5 Click the **Paper** tab, select the paper source, size, and type.

6 Click **OK** and print the document.

Printing Posters

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

1 To change the print settings from your software application, access printer properties. See "Printing a Document" on page 12.

2 Click the **Layout** tab, select **Poster Printing** in the **Layout Type** drop-down list.

3 Configure the poster option:

You can select the page layout from **Poster<2x2>**, **Poster<3x3>**, **Poster<4x4>** or **Custom**. If you select **Poster<2x2>**, the output will be automatically stretched to cover 4 physical pages. If the option is set to Custom, you can enlarge the original from 150% to 400%. Depending on the level of the enlargement, the page layout is automatically adjusted to **Poster<2x2>**, **Poster<3x3>**, **Poster<4x4>**.
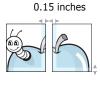
▲ 2x2

▲ 3x3

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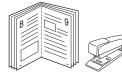
0.15 inches

0.15 inches

4 Click the **Paper** tab, select the paper source, size, and type.

5 Click **OK** and print the document. You can complete the poster by pasting the sheets together.

Printing Booklets

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

1 To change the print settings from your software application, access the printer properties. See "Printing a Document" on page 12.

2 From the **Layout** tab, choose **Booklet Printing** from the **Layout Type** drop-down list.

NOTE: The **Booklet Printing** option is not available for all the paper size. In order to find out the available paper size for this feature, select the paper size in the **Size** option on the **Paper** tab, then check if the **Booklet Printing** in a **Layout Type** drop-down list on the **Layout** tab is activated.

3 Click the **Paper** tab, and select the paper source, size, and type.

4 Click **OK** and print the document.

5 After printing, fold and staple the pages.

Printing on Both Sides of Paper

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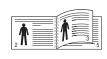
The options are:

- **None**
- **Long Edge**, which is the conventional layout used in book binding.
- **Short Edge**, which is the type often used with calendars.

▲ Long Edge　　　▲ Short Edge

NOTES:

- Do not print on both sides of labels, transparencies, envelopes, or thick paper. Paper jamming and damage to the printer may result.
- To use double-sided printing, you can use only the following paper sizes: A4, Letter, Legal, and Folio, with a weight of 20~24 lbs (75~90g/m^2)

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

Printing a Reduced or Enlarged Document

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

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

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

Fitting Your Document to a Selected Paper Size

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

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

Using Watermarks

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

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

Using an Existing Watermark

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

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

Creating a Watermark

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

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

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

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

Editing a Watermark

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

Deleting a Watermark

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

Using Overlays

What is an Overlay?

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

Creating a New Page Overlay

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

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

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

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

Using a Page Overlay

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

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

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

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

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

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

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

Deleting a Page Overlay

You can delete page overlays that you no longer use.

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

4 Using Windows PostScript Driver

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

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

This chapter includes:

Printer Settings

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

Your printer properties window may differ, depending on your operating system. This Software User's Guide shows the Properties window for Windows XP.
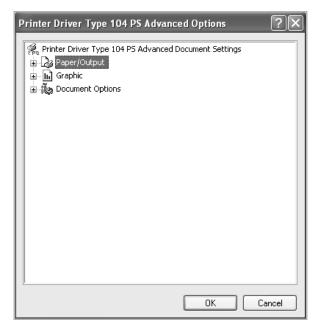
Your printer driver **Properties** window that appears in this User's Guide may differ depending on the printer in use.

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

Advanced

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

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

Using Help

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

5 Sharing the Printer Locally

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

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

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

Setting Up a Host Computer

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

Setting Up a Client Computer

1 Right-click the Windows **Start** button and select **Explorer**.
2 Select **My Network Places** and then right-click **Search for Computers**.
3 Fill in the IP address of host computer in **Computer name** field, and click **Search**. (In case host computer requires **User name** and **Password**, fill in User ID and password of host computer account.)
4 Double-click **Printers and Faxes**.
5 Right-click **printer driver icon**, select **Connect**.
6 Click **Yes**, if the installation confirm message appears.

6 Using Utility Applications

If an error occurs while printing, the Status Monitor window appears, showing the error.

NOTES:

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

Using Printer Settings Utility

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

1 From the **Start** menu select **Programs** or **All Programs** → **Type 104** → **Printer Settings Utility**.

2 Change the settings.

3 To send the changes to the printer, click the **Apply** button.

Using Onscreen Help File

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

Opening the Troubleshooting Guide

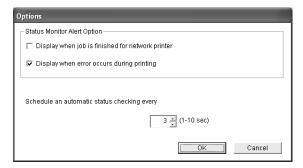Double-click the Status Monitor icon on the Windows task bar.

Double click this icon.

Or, from the **Start** menu, select **Programs** or **All Programs** → **Type 104** → **Troubleshooting Guide**.

Changing the Status Monitor Program Settings

Select the Status Monitor icon on the Windows task bar and right-click on the Status Monitor icon. Select **Options**.

The following window opens.

- **Display when job is finished for network printer** shows the Status Monitor balloon when your job is complete.
- **Display when error occurs during printing** shows the Status Monitor balloon when an error occurs during printing.
- **Schedule an automatic status checking every** allows the computer update the printer status regularly. Setting the value close to 1 second causes the computer to check the printer status more frequently, thereby allowing a faster response to any printer error.

7 Scanning

Scanning with your machine lets you turn pictures and text into digital files on your computer. Then you can fax or e-mail the files, display them on your web site or use them to create projects that you can print using SmarThru software or the WIA driver.

This chapter includes:

- **Scanning Using SmarThru**
- **Scanning Process with TWAIN-enabled Software**
- **Scanning Using the WIA Driver**

NOTES:

- *Check the Operating System(s) that are compatible with your printer. Please refer to the OS Compatibility section of Printer Specifications in your Printer User's Guide.*
- *You can check your printer name in the supplied CD-ROM.*
- *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.*

Scanning Using SmarThru

SmarThru is the accompanying software for your machine. With SmarThru, scanning is the proverbial piece of cake.

NOTE: You can use SmarThru 4 in Windows 98 or higher.

Uninstalling SmarThru

NOTE: Before beginning uninstallation, ensure that all applications are closed on your computer.
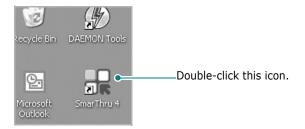
---

1 From the **Start** menu, select **Programs**.

2 Select **SmarThru 4**, and then select **Uninstall SmarThru 4**.

3 When your computer asks you to confirm, click **OK**.

4 Click **Finish**.

You may be prompted to restart your computer. In this case you must shut the computer down and then restart it before the changes will be saved.

Using SmarThru

Follow these steps to start scanning using the SmarThru:

1 Make sure that your machine and computer are turned on and properly connected to each other.

2 Place your photograph or page on the document glass or ADF.

3 Once you have installed SmarThru, you will see the **SmarThru 4** icon on your desktop. Double-click the **SmarThru 4** icon.

Double-click this icon.

The SmarThru 4 window opens.

Make sure that your printer is selected.

●**Scan To**

Allows you to scan an image and save it to an application or folder, email it, or publish it on a web site.

●**Image**

Allows you to edit an image you have saved as a graphic file and send it to a selected application or folder, email it, or publish it on a web site.

●**Copy**

Allows you to produce professional quality copies. You can make black and white or color copies of an image if your machine supports it, and customize the copy settings.
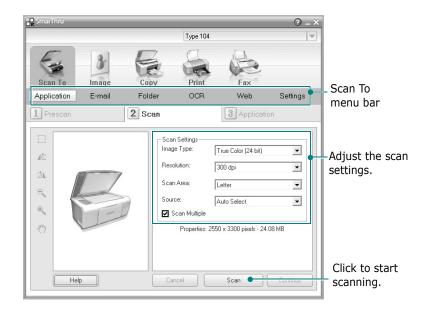
●**Print**

Allows you to print images you have saved. You can print images in black and white or color mode if your machine supports it.

●**Fax**

Allows you to fax images or files you have saved on your computer. This is available when your machine supports the fax feature.

4 Click **Scan To**. The **Scan To** menu bar appears on the SmarThru 4 window.

Scan To menu bar

Adjust the scan settings.

Click to start scanning.

Scan To lets you use the following services:

●**Application**

Scanning an image and placing it in an image editor application, such as Paint or Adobe Photoshop.

●**E-mail**

Scanning an image and emailing it. Allows you to scan an image, preview it, and email it.

NOTE: To send an image by e-mail, you must have a mail client program, like Outlook Express, which has been set up with your e-mail account.

●**Folder**

Scanning an image and saving it to a folder. Allows you to scan an image, preview it, and save it to the folder of your choice.

●**OCR**

Scanning an image and performing text recognition. Allows you to scan an image, preview it, and send it to the OCR program for text recognition.

- Recommended Scan Option for OCR
- Resolution: 200 or 300 dpi
- Image Type: Grayscale or Black & White

●**Web**

Scanning an image, previewing it, and publishing it on a web site, using the specified file format for the image you want to publish.

• **Settings**

Customizing settings of **Scan To** basic functions. Allows you to customize settings for **Application**, **E-mail**, **OCR**, and **Web** functions.

5 Click the service icon according to your job.

6 SmarThru 4 opens for the selected service. Adjust the scan settings.

7 To start scanning, click **Scan**.

NOTE: If you want to cancel the scan job, click **Cancel**.

Using Onscreen Help File

For more information about SmarThru, click ❓ at the top right corner of the window. The SmarThru Help window opens and allows you to view onscreen help supplied on the SmarThru program.

Scanning Process with TWAIN-enabled Software

If you want to scan documents using other software, you will need to use TWAIN-compliant software, such as Adobe PhotoDeluxe or Adobe Photoshop. The first time you scan with your machine, select it as your TWAIN source in the application you use.

The basic scanning process involves a number of steps:

1 Make sure that your machine and computer are turned on and properly connected to each other.

2 Load the document(s) face up into the ADF.

OR

Place a single document face down on the document glass.

3 Open an application, such as PhotoDeluxe or Photoshop.

4 Open the TWAIN window and set the scan options.

5 Scan and save your scanned image.

NOTE: You need to follow the program's instructions for acquiring an image. Please refer to the user's guide of the application.

Scanning Using the WIA Driver

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

NOTE: The WIA driver works only on Windows XP with USB port.

1 Load the document(s) face up into the ADF.

OR

Place a single document face down on the document glass.

2 From the **Start** menu on your desktop window, select **Settings**, **Control Panel**, and then **Scanners and Cameras**.

3 Double click **your scanner driver** icon. The Scanner and Camera Wizard launches.

4 Choose your scanning preferences and click **Preview** to see how your preferences affect the picture.

5 Click **Next**.

6 Enter a picture name, and select a file format and destination to save the picture.

7 Follow the on-screen instructions to edit the picture after it is copied to your computer.

NOTE: If you want to cancel the scan job, press the Cancel button on the Scanner and Camera Wizard.

8 Using Your Printer with a Macintosh

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

This chapter includes:

- **Installing Software for Macintosh**
- **Setting Up the Printer**
- **Printing**
- **Scanning**

Installing Software for Macintosh

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

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

Printer driver

Installing the printer driver

1 Connect your machine to the computer using the USB cable or the Ethernet cable.

2 Turn on your computer and the machine.

3 Insert the PostScript driver CD-ROM which came with your machine into the CD-ROM drive.

4 Double-click the **Type 104** on your Macintosh desktop.

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

6 Double-click the **Type 104 Installer OSX** icon.

7 Click **Continue**.

8 Click **Install**.

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

Scan driver

Install the Scan driver

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

Uninstalling the Scan driver

1 Insert the CD-ROM which came with your printer into the CD-ROM drive.
2 Double-click **CD-ROM icon** that appears on your Macintosh desktop.
3 Double-click the **MAC_Installer** folder.
4 Double-click the **MAC_Twain** folder.
5 Double-click the **ScanThru Installer** icon.
6 Enter the password and click **OK**.
7 Click **Continue**.
8 Select **Uninstall** from the Installation Type and then Click **Uninstall**.
9 When the uninstallation is done, click **Quit**.

Setting Up the Printer

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

For a Network-connected Macintosh

1 Follow the instructions on "Installing Software for Macintosh" on page 29 to install the PPD file on your computer.
2 Open **Print Center** or **Printer Setup Utility** from the Utilities folder.
3 Click **Add** on the Printer List.
4 Select the **AppleTalk** tab.

   The name of your machine appears on the list. Select **MFP000xxxxxxxxx** from the printer box, where the **xxxxxxxxx** varies depending on your machine.
5 Click **Add**.
6 If Auto Select does not work properly, select **Printer Model** and **your printer name** in **Model Name**.

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

For a USB-connected Macintosh

1 Follow the instructions on "Installing Software for Macintosh" on page 29 to install the PPD file on your computer.
2 Open **Print Center** or **Printer Setup Utility** from the Utilities folder.
3 Click **Add** on the Printer List.
4 Select the **USB** tab.
5 Select **your printer name** and click **Add**.
6 If Auto Select does not work properly, select **Printer Model** and **your printer name** in **Model Name**.

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

Printing

NOTES:

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

Printing a Document

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

1 Open a Macintosh application and select the file you want to print.

2 Open the **File** menu and click **Page Setup** (**Document Setup** in some applications).

3 Choose your paper size, orientation, scaling, and other options and click **OK**.

Make sure that your printer is selected.

▲ Mac OS 10.3

4 Open the **File** menu and click **Print**.

5 Choose the number of copies you want and indicate which pages you want to print.

6 Click **Print** when you finish setting the options.

Changing Printer Settings
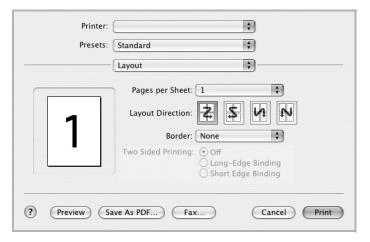
You can use advanced printing features when using your printer.

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

Layout Setting

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

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

▲ Mac OS 10.3

Printer Features Setting

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

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

▲ Mac OS 10.3

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

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

Paper Type
Set **Type** to correspond to the paper loaded in the tray from which you want to print. This will let you get the best quality printout. If you load a different type of print material, select the corresponding paper type.
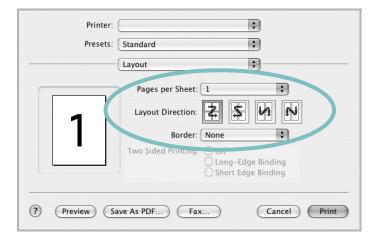
Resolution(Quality)
You can select the printing resolution. The higher the setting, the sharper the clarity of printed characters and graphics. The higher setting also may increase the time it takes to print a document.

Printing Multiple Pages on One Sheet of Paper

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

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

2 Select **Layout**.

▲ Mac OS 10.3

3 Select the number of pages you want to print on one sheet of paper on the **Pages per Sheet** drop-down list.

4 Select the page order from the **Layout Direction** option.

To print a border around each page on the sheet, select the option you want from the **Border** drop-down list.

5 Click **Print**, and the printer prints the selected number of pages on one side of each page.
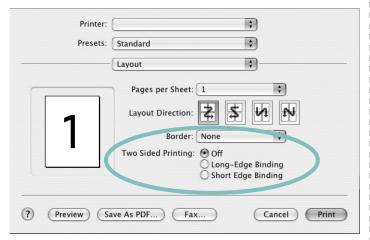
Duplex Printing

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

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

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

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

2 Select the **Layout**.

▲ Mac OS 10.3

3 Select a binding orientation from **Two Sided Printing** option.

4 Click **Print** and the printer prints on both sides of the paper.

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

Scanning

If you want to scan documents using other software, you will need to use TWAIN-compliant software, such as Adobe PhotoDeluxe or Adobe Photoshop. The first time you scan with your machine, select it as your TWAIN source in the application you use.

The basic scanning process involves a number of steps:

• Place your photograph or page on the document glass or ADF.

• Open an application, such as PhotoDeluxe or Photoshop.

• Open the TWAIN window and set the scan options.

• Scan and save your scanned image.

NOTE: You need to follow the program's instructions for acquiring an image. Please refer to the User's Guide of the application.

SOFTWARE SECTION

INDEX

Laser MFP

User's Guide

Laser MFP

Network Printer User's Guide

Read this manual carefully before you use this machine and keep it handy for future reference. For safe and correct use, please be sure to read the Safety Information in this manual before using the machine.

CONTENTS

1 Getting started

Introduction

The Network Printer Card allows you to connect your printer directly to a network to share the printer among multiple users. The printer functions as a network print server supporting various network environments, such as Windows 98/Me/NT/ 2000/XP/2003, UNIX, and Macintosh 8.6 or higher.

This guide assumes that you have:

- A good working knowledge of your network utilities

- A supported network operating system

- A fully operational computer system

- Access to the supervisor account as a network administrator, or access to an account that has supervisor and print server operator privileges

Supported network environments

Administrators and users can configure, and use printers on the following supported network operating systems:

Operating system	Network environment	Printing protocol	Action
Windows	98, NT, ME, 2000, XP, 2003	TCP/IP, LPD (LPR), IPP	See Chapter 3, "TCP/IP environment."
Unix	AT&T system V (Rel 4.2), BSD4.3, HP-UX (Rel 9.x & Rel 10.x), SCO 5.x, SUNOS 5.5, Sparc or Solaris 2.5.	TCP/IP, LPD (LPR)	See Chapter 3, "TCP/IP environment."
Macintosh	Macintosh 8.6 ~ 9.2, 10.1 ~ 10.3, or higher	TCP/IP, EtherTalk, Bonjour	See Chapter 4, "EtherTalk environment."

Note: Your printer may not support all of the listed computing environments (operating systems). Therefore, check the network environment your printer supports in the user's guide that came with the printer.

Network Printer Card

System requirements
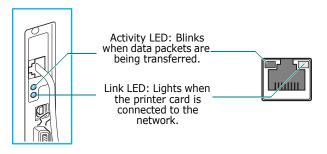
The following hardware is required to configure a printer for network applications.

Computer	Requirements
IBM - compatible PC	• 80486 CPU or higher • Minimum of 16 MB of RAM • 2 MB of free disk space
Macintosh	• PowerPC 68020 or higher • Minimum of 8 MB of RAM • 2 MB of free disk space

Connecting your Network Printer Card

1   Use a twisted pair cable with an RJ-45 connector to connect the printer to your network.

Once a connection is established between the wired network printer card and your network, the link LEDs on the card light.

Activity LED: Blinks when data packets are being transferred.

Link LED: Lights when the printer card is connected to the network.

2   Set up your printer's IP address. See "IP address setup" on page 2.1.

2 Programs supplied on the CD

The CD-ROM supplied with your printer card provides you with:

- **SetIP**: A utility program allowing you to select a network printer card and manually configure the addresses for use with the TCP/IP protocol.

System requirements

To install SetIP, the following are required:

- Operating system: Windows 2000/XP/2003
- Computer/Processor: 133 MHz or faster Pentium-compatible processor
- Memory: 256 MB (recommended)
- Hard Disk space: 2 GB hard disk with 1.5 GB available hard-disk space
- Internet Explorer 5.5 or later, or Mozilla 1.0

Installing software

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

    The CD-ROM will automatically run. If it does not, click **Start** → **Run**, enter **x:/cdsetup.exe** (**x** represents your CD-ROM drive), and click **OK**.

2   Select the language you want.

3   Click **Typical installation for a network printer**.

4   Follow the onscreen instructions to complete installation.

5   Click **Finish** when installation is done.

Uninstalling software

You should remove the Network utilities if you are upgrading the software or if the installation fails.

Note: Close all programs before uninstalling software.

1   Click **Start** → **Programs** → **Type 104** → **SetIP** → **Uninstall SetIP**.

2   Click **OK** to confirm uninstallation.

3   Click **Finish** when uninstallation is done.

IP address setup

Before using your network print server in your network, you must set TCP/IP addresses for the print server. You will need your printer card's MAC address, IP address, subnet mask, and gateway address. First, check with your network administrator for the TCP/IP addresses.

Note: The MAC address is the hardware serial number of the network printer card. You can check the address by printing the Network Printer Configuration Page. For printing the page, refer to your printer user's guide.

You can set your print server's IP address via the following methods:
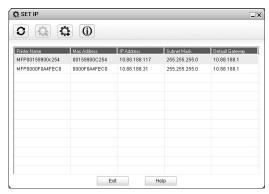
- Printer control panel: If your printer has a control panel and the network configuration menu, you can set the IP address directly from the printer. Refer to your printer user's guide.
- SetIP program: Go to the **Using SetIP**.
- Web Image Monitor Type 104: Once you have set an IP address for your network print server, you can use the embedded web server in the network printer card to change the address. Go to next column.
- DHCP: You can use Dynamic Host Configuration Protocol (DHCP) to get an IP address automatically assigned by your network administrator, if your network system supports this protocol.
- BOOTP: A network-based server using the BootStrap protocol (BOOTP) can notify the network printer card of its assigned IP address each time the printer turns on, if your network system supports this protocol.

Note: To get an IP address from the DHCP or BOOTP server, the IP assignment method must be set to DHCP or BOOTP.

Using SetIP

1   From the Windows **Start** menu, select **Programs** → **Type 104** → **SetIP** → **SetIP**.
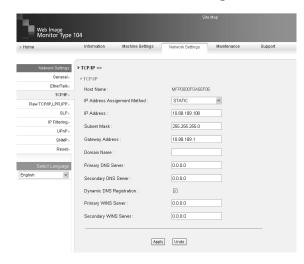
    The program automatically detects and displays new and configured print servers on your network.

2 Select the name of your printer and click ⚙. If you cannot find your printer name, click ↻ to refresh the list. Even with this step, if you cannot find your printer name, then contact Network Administrator.

3 Enter your network printer card's MAC address (hardware address), IP address, subnet mask, default gateway, and then click **Apply**.

4 Click **OK** to confirm the settings.

5 Click **Exit** to close the SetIP program.

Using Web Image Monitor Type 104

1 Run your web browser.

2 Enter your print server's IP address in the URL field and click **Go**.

3 Click **Network Settings → TCP/IP**.

4 Select **Static** from **IP Address Assignment Method**.

5 Enter your print server's TCP/IP addresses and click **Apply**.

3 TCP/IP environment

A TCP/IP network provides you with various protocols for using printing devices and managing various types of networked devices.

In this chapter, you will learn which management protocols are available in TCP/IP network environments, and how to print via your network print server using TCP/IP protocol.

Management protocols

Before beginning to print documents via your network printer, you need to check or configure some parameters using management protocols.

DHCP/BOOTP

Dynamic Host Configuration Protocol (DHCP) is a communication protocol enabling network administrators to centrally manage and to automate the assignment of IP addresses in a network. In an IP network, each device needs a unique IP address. DHCP lets a network administrator supervise and distribute IP addresses from a central point and automatically sends a new IP address when a device is plugged into a different place in the network.

Bootstrap Protocol (BOOTP) is UDP/IP-based protocol which allows a booting host to configure itself dynamically and without user supervision. BOOTP provides means to notify a host of its assigned IP address, the IP address of a boot server host, and other configuration information, such as the local subnet mask, the local time offset, and the addresses of default routers. Addresses of various Internet servers can also be transferred to a host using BOOTP.

DHCP is active by factory default on your network print server. After boot up, the network print server will get an IP address automatically from the DHCP server, if one exists. To set an IP address manually, see page 2.1.

Configuring DHCP/BOOTP

To enable or disable DHCP/BOOTP, use one of the following methods:

- **Printer's control panel**: Refer to Network Menu settings in your printer user's guide.

- **Web Image Monitor Type 104**: Select **Network Settings → TCP/IP** and select **DHCP** or **BOOTP** from the IP Address Assignment Method list.

HTTP

Hypertext Transfer Protocol (HTTP) is an application layer protocol for distributed, collaborative, hypermedia information systems. It is a generic, stateless protocol which can be used for many tasks beyond its use for hypertext, such as with name servers and distributed object management systems. You are using HTTP when you connect your network printer via a web browser.

The Network Printer Card has a built-in web server, Web Image Monitor Type 104. You can configure and manage your network print server through Web Image Monitor Type 104 using HTTP over TCP/IP.

SNMP

Simple Network Management Protocol (SNMP), which is part of the TCP/IP protocol suite, is an application layer protocol that facilitates the exchange of management information between network devices. It enables network administrators to remotely monitor and configure network devices, find and solve network problems, and plan for network growth.

Network devices are monitored and controlled using four basic SNMP commands:

- **read**: is used by a Network Management server to monitor network devices. The server examines different variables that are maintained by the devices.

- **write**: is used by a Network Management server to control managed devices. The server changes the values of variables stored within the devices.

- **trap**: is used by network devices to asynchronously report events to a Network Management server. When certain types of events occur, a device sends a trap to the specified server.

- **Traversal operations**: are used by a Network Management server to determine which variables a network device supports and to sequentially gather information in variable tables, such as a routing table.

Configuring SNMP

To access your network print server using SNMP, Community Name/Access Permission pair must be properly specified. There are two access permission: read and write.

Assign the IP addresses of trap hosts and community names (IP addresses) of network devices in Web Image Monitor Type 104; select **Network Settings → SNMP**.

Using SNMP

Web Image Monitor Type 104 accesses, configures, and manages network devices using SNMP. You can use other MIB (Management Information Base) browser software, which allows you to access management information gathered from network devices.

SLP

Service Location Protocol (SLP) is an Internet standard network protocol that provides a framework to allow networking applications to discover the existence, location, and configuration of networked services in enterprise networks, such as printers, Web servers, fax machines, video cameras, file systems, backup devices (tape drives), databases, directories, mail servers, and calendars.

In order to locate services on the network, users of network applications are required to supply the host name or network address of the device that supplies a desired service. However, SLP eliminates the need for a user to know the name of a network host supporting a service. Rather, the user only needs to supply the desired type of service and set of attributes or keywords, which describe the service.

Based on that description, SLP also resolves the network address of the service of the user. Administrators do not need to help clients find new services or to remove services when they are no longer available. SLP uses multicasting and can work over subnet boundaries.

Configuring SLP

You can configure SLP protocol settings through Web Image Monitor Type 104. Select **Network Settings → SLP**.

- **SLP Protocol**: You can enable or disable SLP.

- **Port Number**: The port number is fixed to 427.

- **Scope 1 ~ 3**: A scope is a set of services and a string used to group resources by location, network, or administrative category. Each scope should not be more than 32 characters.

- **Message Type**: You can select the outgoing SLP message type sent to network devices. The default value is **Multicast**.

- **Multi Cast Radius**: You can specify the maximum number of subnets that SLP multicasts can travel across. This value is also called the "hop count" or "time-to-live" (TTL). The default value is 255.

- **Registration Lifetime**: You can define the time in seconds before the Server Agents registration expires.

- **Multicast Address**: The Multicast Address value is fixed to 239.255.255.253, 224.0.1.127.

Using SLP

Once **SLP enabled** is checked, the network print server works as a Service Agent and the User Agent.

Dynamic DNS (DDNS)

DNS (Domain Name System) is used for registration of domain names and provides Host names to an IP address resolution service. For printer devices, DNS may be utilised for printer domain name registration, so that print server clients may refer to the printer by its host name rather than by its IP address. Even though a printer's IP address is changed, all clients can operate this printer without reconfiguration. Addressing to a printer device by IP address is not convenient and may often go stale if an IP address to a device is assigned dynamically via a DHCP server. If the DHCP server can provide information about a printer's changing IP address to the DNS server automatically, user convenience is increased. The printer's name will be used as its DNS name.

Configuring DDNS

1   Let the DHCP server provide updated information to the DNS server.

2   Configure the same DDNS domain through Web Image Monitor Type 104 as entered in the DNS server.

   If you connect your network printer via a web browser, you can enable this by selecting **Network Settings → TCP/IP → Dynamic DNS Registration**.

3   Set the IP assignment method of your network print server to **DHCP** and reboot the printer.

   The DNS server will update its database and users can use the printer's name instead of its IP address.

WINS

Before Dynamic DNS was defined, DNS could only be updated manually when DHCP servers automatically provided (or removed) IP addresses. As a result, DNS servers often contained obsolete listings. In response, Microsoft developed Windows Internet Name Service (WINS) to solve this problem for NetBIOS names.

Microsoft now recommends moving to Dynamic DNS and away from WINS. However, many customers including Microsoft maintain WINS systems and need devices to interoperate with WINS. So devices must, at least for now, support WINS interoperability to allow for dynamic NetBIOS name to IP address registration and resolution.

WINS provides a distributed database for registering and querying dynamic NetBIOS names to IP address mapping in a routed network environment. This is the best choice for NetBIOS name resolution in such a routed network because it is designed to solve the problems that occur with name resolution in complex Internet networks.

Configuring WINS

Access Web Image Monitor Type 104 and select **Network Settings → TCP/IP**. You will configure two WINS server addresses, the Primary WINS Server or the Secondary WINS Server. The default value is 0.0.0.0.

In a DHCP server

A DHCP server can support the NBNS (NetBIOS Name Server) option. An administrator has to set the WINS server IP address in the NBNS option.

1 Set the IP assignment method of your network print server to **DHCP**.

2 Reboot the print server.

The WINS server will update the printer's NetBIOS name in its database. Users can use the printer name instead of its IP address.

In the network print server

1 Configure the WINS server address through Web Image Monitor Type 104.

2 Reboot the print server.

The WINS server will update the printer's NetBIOS name in its database. Users can use the printer name instead of its IP address.

Bonjour

Bonjour allows for a network system to be easily discovered and its capabilities to be revealed by any Bonjour-compliant client software, such as Print Center Utility built in to Mac OS X. For details, see page 4.2.

UPnP

UPnP is an architecture for pervasive peer-to-peer network connectivity of intelligent appliances, wireless devices, and PCs of all form factors. It is designed to bring easy-to-use, flexible, standards-based connectivity to ad-hoc or unmanaged networks whether in the home, in a small business, public spaces, or attached to the Internet.

UPnP is a distributed, open networking architecture that leverages TCP/IP and Web technologies to enable seamless proximity networking in addition to control and data transfer among networked devices in the home, office, and public spaces.

UPnP is more than just a simple extension of the plug and play peripheral model. It is designed to support zero-configuration, "invisible" networking, and automatic discovery for a wide breadth of device categories from a wide range of vendors. This means a device can dynamically join a network, obtain an IP address, convey its capabilities, and learn about the presence and capabilities of other devices. DHCP and DNS servers are optional and are used only if available on the network, while a device can leave a network smoothly and automatically without leaving any unwanted state issues behind.

UPnP supports 6 protocol stacks for addressing, discovery, description, control, eventing, and presentation, but the Network Printer Card supports only Simple Service Discovery Protocol (SSDP) which allows addressing, description, and discovery.

Configuring UPnP

- Control panel: Refer to the Network Menu setting in your printer user's guide.

- Web Image Monitor Type 104: Select **Network Settings → UPnP**.
  - **Auto IP Enabled**: You can enable or disable Auto IP. When this option is selected, the network print server cannot find the control point and receive an IP address from the control point. The network print server will create an IP address of "169.254.XXX.XXX."
  - **Multicast DNS Enabled**: SSDP can use Multicast DNS.
  - **SSDP Enabled**: You can enable or disable SSDP.
  - **SSDP TTL**: You can specify the maximum number of subnets that SSPD multicasts can travel across.

Using UPnP

If SSDP (Simple Service Discovery Protocol) is enabled, your network print server is checked by a control point. This control point is an application which supports finding UPnP devices. Information on searching and control functions or your network print server's device information is displayed in an XML page (http://xxx.xxx.xxx.xxx:5200/printer.xml).

Printing protocols

Before setting the network printing ports, you must install the printer driver with the local port (LPT) on the system. Refer to your printer user's guide.

Standard TCP/IP port

You can print your documents to your network printer by creating a Standard TCP/IP port.

Configuring Standard TCP/IP in Windows 2000/XP/2003

You can enable or disable the Standard TCP/IP Printing port through Web Image Monitor Type 104. Select **Network Settings** → **Raw TCP/IP, LPR, IPP**.

You can also change the port number of the Standard TCP/IP port. The default port number is 9100.

Creating a Standard TCP/IP port

1   In Windows XP, click **Start** → **Printers and Faxes**. In Windows 2000/2003, click **Start** → **Settings** → **Printers**.

2   Click **Add a printer** or double-click **Add Printer**, and then **Next**.

3   Click **Local printer attached to this computer** and then **Next**.

    Make sure that **Automatically detect and install my Plug and Play printer** is not selected.

4   Click **Create a new port**, select **Standard TCP/IP port** from the Type of port list, and click **Next**.

5   Click **Next**.

6   Enter the IP address or DNS name of your network printer and click **Next**.

    For the port name, a default name will be entered by Windows. You can change it to a more user-friendly name.

7   Follow the instructions on the screen to complete installation.

    Now, you can select your printer from the Print Setup dialogue box.

LPR port

LPD, Line Printer Daemon, is the protocol associated with line-printer spooling services. Users can use the printing service from LPD running on a network print server through the LPR port. Most operating systems, such as Microsoft Windows NT/2000/XP/2003, and support LPR port printing.

Configuring an LPR port

You can enable or disable the LPR Printing port through Web Image Monitor Type 104. Select **Network Settings** → **Raw TCP/IP, LPR, IPP**. You can also change the port number of LPR/LPD. The default port number is 515.

In Windows NT

Before adding an LPR printing port, make sure that Microsoft TCP/IP printing service is installed on your Windows NT computer, or install the software, if necessary.

Installing the TCP/IP printing service

1   Make sure your computer supports Microsoft TCP/IP printing service.

    1) From the Windows **Start** menu, select **Settings** → **Control Panel**.

    2) Double-click **Network**.

    3) Make sure that **TCP/IP protocol** is listed in the Protocols tab and Microsoft TCP/IP printing is listed in the **Services** tab. If not, go to step 2.

2   Install TCP/IP printing service:

    Click **Add** and select **TCP/IP protocol** → **Microsoft TCP/IP Printing**. Follow the onscreen instructions to complete installation.

Notes:
- During the installation process, you may need the Windows Installation CD-ROM.
- You can only install Microsoft TCP/IP Printing if you have administrator privileges.

    After installing the service, restart your computer.

Adding an LPR port

1   From the Windows **Start** menu, select **Settings** → **Printers**.

2   Click **Add Printer**.

3   Click **My Computer** and then **Next**.

4   Click **Add Port** and select **LPR Port** from the port type list.

5   Click **New Port**.

6   Enter the IP address or DNS name of the printer and the name of a user-defined print queue.

7   Click **OK**.

8   Follow the onscreen instructions to complete installation.

In Windows 2000/XP/2003

To add an LPR port to Windows 2000/XP/2003, users must install a Standard TCP/IP port by default, then change the printing protocol in the printer properties. For installing the Standard TCP/IP port, see page 3.4.

1 From the Windows **Start** menu, select **Settings** → **Printers**, or **Printers and Faxes**.

2 Right-click the printer you want and select **Properties**.

3 Click **Ports**.

4 Make sure that the appropriate Standard TCP/IP port is selected and click **Configure Port**.

5 Select **LPR** from the Protocol section.

6 Enter the print queue name and click **OK**.

7 Click **OK** to close the properties window.

In Unix

Depending on your particular Unix system, LPD configuration may vary. See your system documentation for the correct syntax for the system.

Printer Port

A Network Printer port is used to send print jobs from network computers running Windows OS that do not support the Standard TCP/IP port or LPR port. Adding a Network Printer port

1 From the Windows **Start** menu, select **Settings** → **Printers**, or **Printers and Faxes**.

2 Right-click the printer you want and select **Properties**.

3 In Windows 98/Me, click **Details**.

   In Windows NT4.0/2000/XP/2003, click **Ports**.

4 Click **Add Port**.

5 Select **Network Printer Port** from the Other list and click **OK**.

6 Select the print server you want to use and click **OK**.

   If you cannot find the print server, click **Add New Print Server to list**, specify information for the print server, such as print server name, IP address, or MAC address, and click **OK**.

7 When the port name displays in the Print to the following port list, click **OK** or **Close**.

IPP port

Internet Printing Protocol (IPP) allows printing across the Internet, meaning that you can send a print job to your printer from a remote place if you are an Internet user, no matter what operating system you use or where you are.

Configuring IPP in the print server

The network administrator must specify information required for IPP, such as the URI (Uniform Resource Identifier).

1 Run your web browser and access Web Image Monitor Type 104.

2 Click **Network Settings** → **Raw TCP/IP, LPR, IPP**.

3 Configure the IPP parameters:

- **Printer Name**: Enter the network printer's name to be used with IPP printing.

- **Printer URI**: Enter the URL of the printer using the following format: ipp://the IP address of the printer or http://the IP address of the printer:631 (Ex:ipp://168.10.17.82 or http://168.10.17.82:631) 631 is the IPP port number.

- **Printer Information**: Enter additional information about the printer.

- **More Printer Information**: Enter more additional information about the printer.

- **Printer Location**: Enter the name of the location where the printer is physically located.

- **Multiple Operation Timeout**: Enter the time to elapse before the printer ends a print job. When there is no incoming data after the specified number of seconds, the printer ends reception.

- **Time to Keep Jobs in History**: Set the length of time the IPP printer keeps job information.

- **Operator Message**: Enter printer information for printer users.

- **Job Count**: shows the number of print jobs.

- **Driver Installer**: shows the URL where you can get the driver installer.

- **Manufacturer**: shows the URL where you can get manufacturer information.

4 Click **Apply**.

Configuring a Windows client

After the network administrator has configured the network print server, each printer user must install the printer driver and set the print port to IPP 1.1 Port Monitor.

Note: Before following the steps below, each printer user should install the printer driver. If the printer driver is not already installed on the computer, install the printer driver that came with the printer. Select the local port (LPT) when you install the driver.

1 From the Windows **Start** menu, select **Settings** → **Printers**, or **Printers and Faxes**.

2 Right-click the printer you want and select **Properties**.

3 In Windows 98/Me, click **Details**.

In Windows NT4.0/2000/XP/2003, click **Ports**.

4 Click **Add Port**.

5 Select **IPP Port** from the Other list and click **OK**.

6 Enter the printer URL and port name and click **OK**.

7 When the port name displays on the print port list, click **OK**.

Now you can select the network print server from the Print Setup dialogue box to send a job.

Setting IPP security

Web Image Monitor Type 104 allows administrators to choose an authentication method and to create or modify user accounts.

1 Run your web browser and access Web Image Monitor Type 104.

2 Click **Network Settings** → **Raw TCP/IP, LPR, IPP**.

- **Authentication**: You can set a user name and password encryption method (refer to http digest authentication in RFC).

- **User DB**: You can set a user name and password for IPP printing. You can set up the user database for up to 10 items.

3 Click **Apply**.

Note: A user name should be unique for all slots and should not include symbols. The length of the user name and the password should each be less than 7 characters.

Additional functions

The following are additional functions you can use through Web Image Monitor Type 104.

Printer properties settings

You can check and modify printer and document properties for an installed printer. For properties that are not supported by the printer driver, an error message indicating that the property is not supported is displayed. These settings are used only for printing from this system to the printer. However, these settings do not affect the printer properties of the network printer.

Firmware upgrade (HTTP)

You can upgrade your printer's firmware using the HTTP protocol. First, you need to download firmware from the website

Note: Before upgrading the firmware, make sure that TCP/IP parameters are entered in the print server.

1 Run your web browser and access Web Image Monitor Type 104.

2 Click **Maintenance** → **Firmware Upgrade**.

3 Select a firmware type, **Printer Firmware** or **Network Firmware**.

4 Click **Browse**, and then select the downloaded new firmware.

5 Click **Upgrade**.

Note: It takes a few minutes to upgrading the firmware. After completely upgrade, the printer will be reset.

Default setting (HTTP/SNMP)

You can reset all of your network parameter settings to their default status.

Note: All default parameters will be applied after the print server restarts.

IP filtering

This security feature (IP Filtering) provides the ability to prevent unauthorised network access to the network print server based on IP addresses set by a network administrator using Web Image Monitor Type 104.

1 Run your web browser and access Web Image Monitor Type 104.

2   Select **Network Settings → IP filtering**.

3   Configure an IP filter.

- **IP filtering**: You can enable or disable IP filtering.

- **IP Address1 ~ IP Address10**: You can enter filtered IP addresses. Users having the IP addresses set here are able to access the network print server.

4   Click **Apply**.

Only system administrators or authorised users can set, via Web Image Monitor Type 104, IP addresses that can access the device. Up to 10 addresses or ranges of address choices can be made and set. Authorised users are able to change the action (Apply/ Undo) and to print to the network print server.

Note: Ranges of addresses shouldn't contain "null" or "0.0.0.0" values.

Reset

1   Run your web browser and access Web Image Monitor Type 104.

2   Click **Network Settings → Reset**.

You can reboot the network print server, if your network settings are not applied correctly or the network card is disconnected from your network.

Ethernet speed

You can set the communication speed for Ethernet connections.

1   Run your web browser and access Web Image Monitor Type 104.

2   Click **Network Settings → General**.

- **Speed Rate**: Automatic, 10 Mbps(Harf Duplex), 10 Mbps(Full Duplex), 100 Mbps(Harf Duplex), 100 Mbps(Full Duplex). select a Ethernet speed from the drop-down list.

3   Click **Apply**.

4 EtherTalk environment

EtherTalk is AppleTalk used in an Ethernet network. This protocol is widely used in Macintosh network environments. Microsoft Windows system also supports this protocol. Like TCP/IP, EtherTalk also provides packet transmission and routing functionality.

The network printer card works on EtherTalk networks, if the host printer supports PostScript. The description in this chapter applies to network printing from a Macintosh computer.

EtherTalk printing

Printing in an EtherTalk network is possible with several different hardware and software configurations. When you issue a command to print a document, the application begins a series of EtherTalk calls attempting to establish a connection to the printer. The calls first initiate the NBP (Name Binding Protocol) name-lookup process to find the currently selected printer and its EtherTalk address. Then the Printer Access Protocol (PAP) is used to open a connection with the printer.

Once the connection has been established, the workstation and printer interact over a PAP connection. PAP uses lower-level protocols, such as ATP and DDP, to provide a data-stream service for sending print data to the printer.

Configuring EtherTalk

You can configure EtherTalk using the following methods:

Control Panel

Refer to the Network Menu setting in your printer user's guide.

Web Image Monitor Type 104

1 Run your web browser.

2 Enter the printer's IP address in the URL field and click **Go**.

3 Select **Network Settings → EtherTalk**.

- **EtherTalk Protocol**: allows you to enable or disable the EtherTalk protocol.

- **Printer Name**: allows you to set the printer name for EtherTalk protocol. The default name is MFP+MAC address. This name is automatically displayed on Chooser.

- **Printer Type**: shows the printer type.

- **Last Error Occurred**: shows the last error.

- **RTMP**: allows you to set the time in seconds after which the routing table entry maintained by the RTMP protocol times out.

- **ZIP (current zone)**: shows the AppleTalk Zone name. If there is no configured zone, *(asterisk) should be displayed.

- **PAP (wait time before transmitting a tickle packet)**: enables you to define the time interval in seconds after which the PAP protocol should resend a tickle packet to verify the status of the PAP connection between the printer and your Macintosh.

4 Click **Apply**.

Configuring the printer

Note: The following instructions are for Mac OS 10.3, but similar for other versions.

The following steps must be taken to configure the network printer for use on a Macintosh system. If the network printer you want to use is not listed in the printer pop-up menu when you try to print a document, you should add it to your list of available printers.

1 Open **System Preferences** and click **Print & Fax**.

2 Click **Printing → Set Up Printers**.

3 If the printer already appears in the printer list, select the **In Menu** check box to add it to your list of available printers. You will see the printer in the Printer pop-up menu the next time you print.

4 Choose **Printers → Add Printer**.

5 Choose **AppleTalk** from the pop-up menu list on the top.

6 If necessary, choose an AppleTalk zone from the pop-up menu that appears directly below it. Any AppleTalk printers in the zone you have chosen appear in the Printer List.

7 Select the printer in the Printer List.

8 To use printer-specific features, choose the item appropriate for your printer from the Printer Model pop-up menu, then select your printer in the Model Name list.

9 Click **Add**.

The printer appears in the Printer List as the default printer (in boldface). It also appears in the Printer pop-up menu when you print a document.

TCP/IP printing

Apple added TCP/IP printing to all versions including and after OS 8.6.

> **Note**: Ensure that the Macintosh has version 8.6 or later. Earlier versions do not support TCP/IP printing as standard.

An IP printer is a network printer that uses TCP/IP protocols (such as LPD/LPR, IPP, or Socket or Jet Direct) to make itself accessible to your computer. If the IP printer you want to use is not listed when you want to print, you can add it to your list of available printers. To add an IP printer, you need to know its IP address or DNS name.

1 Open **System Preferences** and click **Print & Fax**.

2 Click **Printing** → **Set Up Printers**.

3 If the printer already appears on the Printer List, select the **In Menu** check box to add it to your list of available printers. You will see the printer in the Printer pop-up menu the next time you print.

4 Choose **Printers** → **Add Printer**.

5 Choose **IP Printing** from the pop-up menu.

6 Select the appropriate printing protocol from the Printer Type pop-up menu.

7 Enter the IP address or DNS name for the printer in the Printer Address field.

8 If your printer requires it, type the queue name for your printer in the Queue Name field.

9 To use printer-specific features, choose the item appropriate for your printer from the Printer Model pop-up menu, then select your printer in the Model Name list.

10 Click **Add**.

The printer appears on the Printer List as the default printer (in boldface). It also appears in the Printer pop-up menu when you print a document.

Bonjour printer

Usually used in Macintosh networks to search for network devices, Bonjour consists of IPv4 Link-Local Addressing, Multicast DNS, and DNS Service Discovery. Known as zero configuration networking, Bonjour uses industry standard IP protocols to allow devices to automatically find each other without the need to enter IP addresses or configure DNS servers.

In order to provide a true zero configuration experience, meaning that you do not need to configure network parameters, the printer MUST have Bonjour enabled by default. It is NOT possible to disable any part of Bonjour.

After boot up, check the Bonjour printer name of this printer network card in Mac OS X.

1 Open **System Preferences** and click **Print & Fax**.

2 Click **Printing** → **Set Up Printers**.

3 If the printer already appears on the Printer List, select the **In Menu** check box to add it to your list of available printers. You will see the printer in the Printer pop-up menu the next time you print.

4 Choose **Printers** → **Add Printer**.

5 Choose **Bonjour** from the pop-up menu. Any Bonjour-enabled printers on your local network or subnetwork appear on the Printer List.

6 Select your printer from the Printer List.

7 To use printer-specific features, choose the item appropriate for your printer from the Printer Model pop-up menu, then select your printer in the Model Name list.

8 Click **Add**.

The printer appears on the Printer List as the default printer (in boldface). It also appears in the Printer pop-up menu when you print a document.

5 Appendix

Specifications

Items	Specifications
Supported networks	• Windows: 98, NT, ME, 2000, XP, 2003 • Unix: AT&T system V (Rel 4.2), BSD4.3, HP-UX (Rel 9.x & Rel 10.x), SCO 5.x, SUNOS 5.5, Sparc or Solaris 2.5. • Macintosh: Macintosh 8.6 ~ 9.2, 10.1 ~ 10.3, or higher
Protocol	TCP/IP, LPD (LPR), IPP, EtherTalk, Bonjour
Configuration utilities	SetIP, Web Image Monitor Type 104
Hardware requirements	• PC: 　- 80486 CPU or higher 　- Minimum of 16 MB of RAM 　- 2 MB of free disk space • Macintosh: 　- PowerPC 68020 or higher 　- Minimum of 8 MB of RAM 　- 2 MB of free disk space

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INDEX